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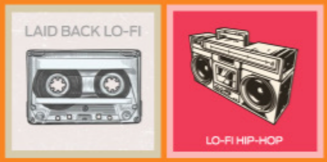
ACUSTICA AUDIO FIRE: THE CM COMP

COMPUTER music

September 2023 / CM324

LO-FI SAMPLES



PLUS BACK TO THE 80s SAMPLES

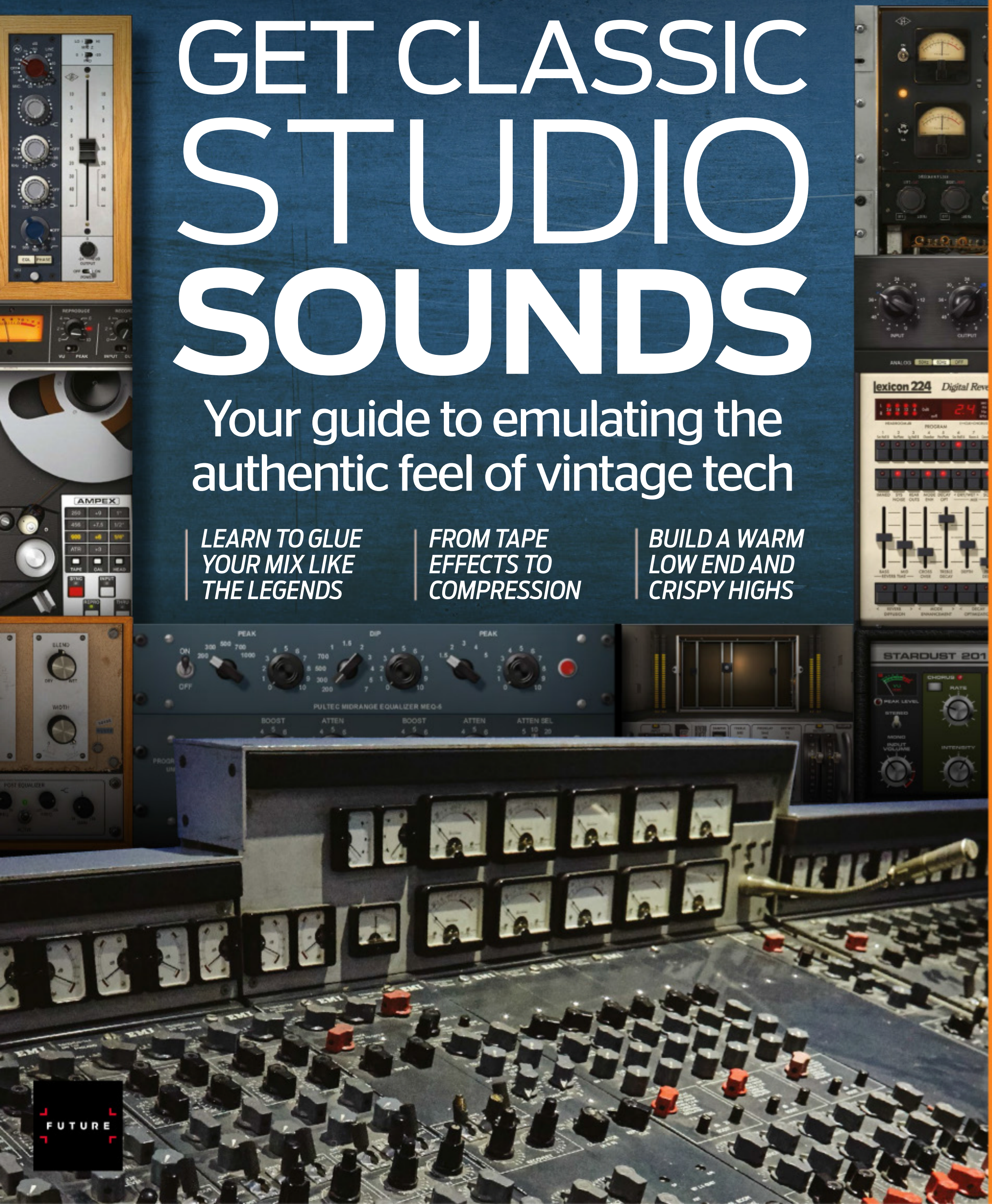
GET CLASSIC STUDIO SOUNDS

Your guide to emulating the authentic feel of vintage tech

LEARN TO GLUE YOUR MIX LIKE THE LEGENDS

FROM TAPE EFFECTS TO COMPRESSION

BUILD A WARM LOW END AND CRISPY HIGHS



DJANGO DJANGO

Embracing 90s dance on an interstellar new album

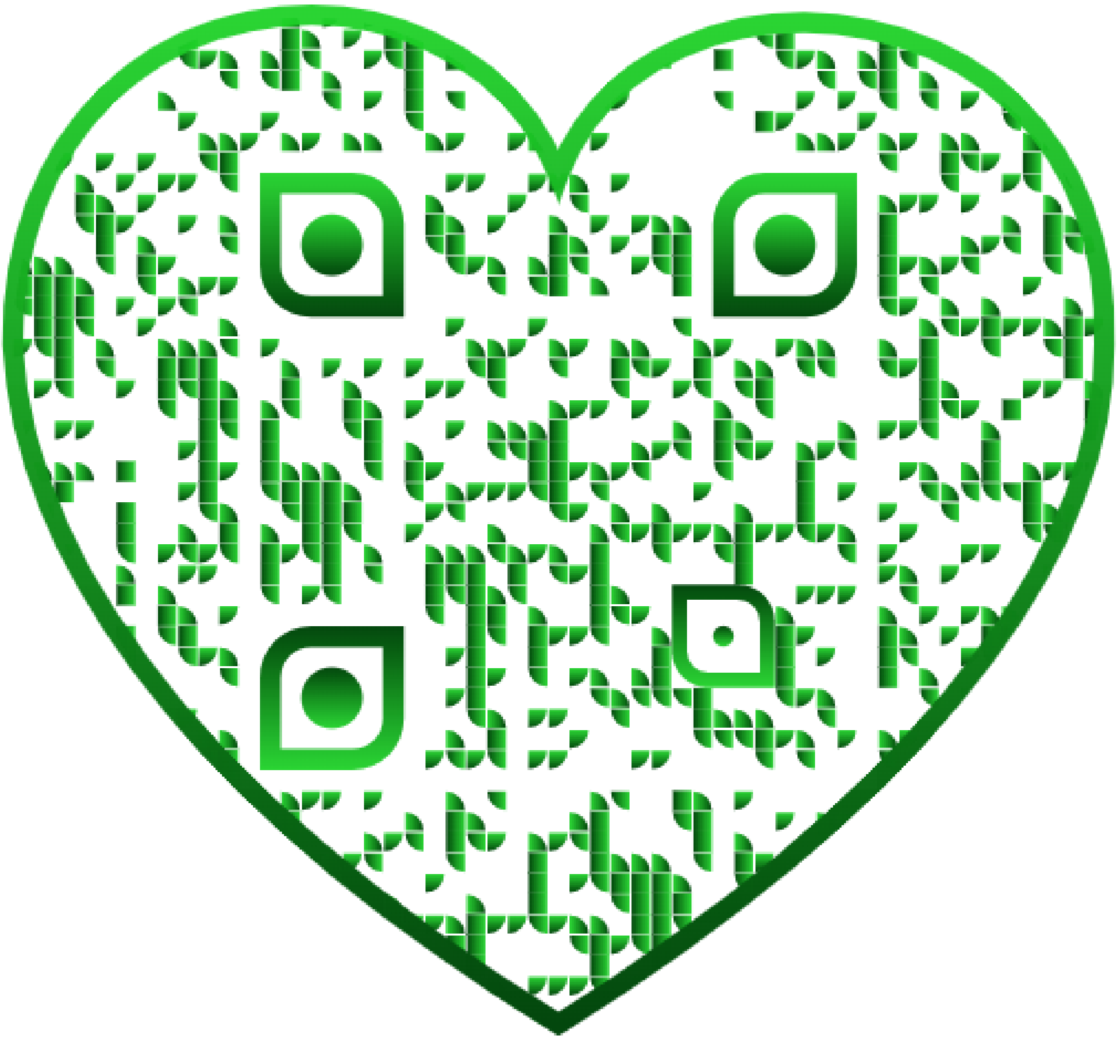
SHIDA SHAHABI

On merging electronica with classical elements

IPAD LOGIC

We dive into Logic Pro for iPad's finest additions

FUTURE



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SCAN TO GET OUR WEEKLY NEWSLETTER

DOWNLOAD

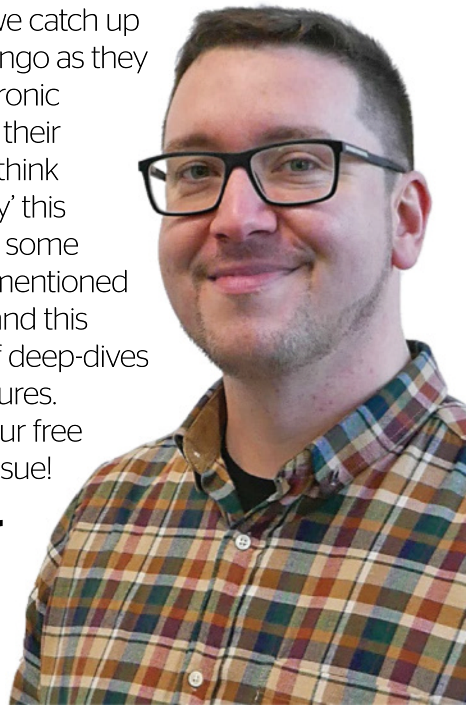
See page 83 to find out how to download this issue's exclusive content

ALL NEW DOWNLOAD SYSTEM

welcome

Last month we speculated about the studio of tomorrow, and how a range of new releases (namely, the third version of Ableton's Push and the long-awaited Logic Pro for iPad) were potential harbingers of an entirely computer-free state of affairs. This brave new desktop-less world was further indicated by the awe-inspiring Vision Pro demo from Apple, the first genuinely exciting AR tech we've really seen. Though in its infancy (and with some pretty big hurdles needing to be overcome) it leaves those of us of a musical persuasion imagining what headset and gesture-based production software will inevitably be built for it.

While it's always a geeky thrill to ponder what the future will bring, it's also important to reflect on how far things have already come. Only 30 years back, home production was still predominantly a hardware affair. To make release-quality tracks, you'd really need to shell out for some studio time, or be good enough to get signed. These days, we can recreate some of those legendary studio hardware staples in software. Our main feature this month is all about bringing the revered warmth of analogue desks and vintage effect units to our modern software-based setups. Start your journey on page 18. Also this issue we catch up with the mighty Django Django as they deliver a blinding new electronic record, replete with nods to their formative influences. If you think we're being a little too 'past-y' this issue, then we've also spent some quality time with that aforementioned new iPad version of Logic, and this month we've got a range of deep-dives into its most innovative features. Also, don't forget to grab your free Acustica plugin. Enjoy the issue!



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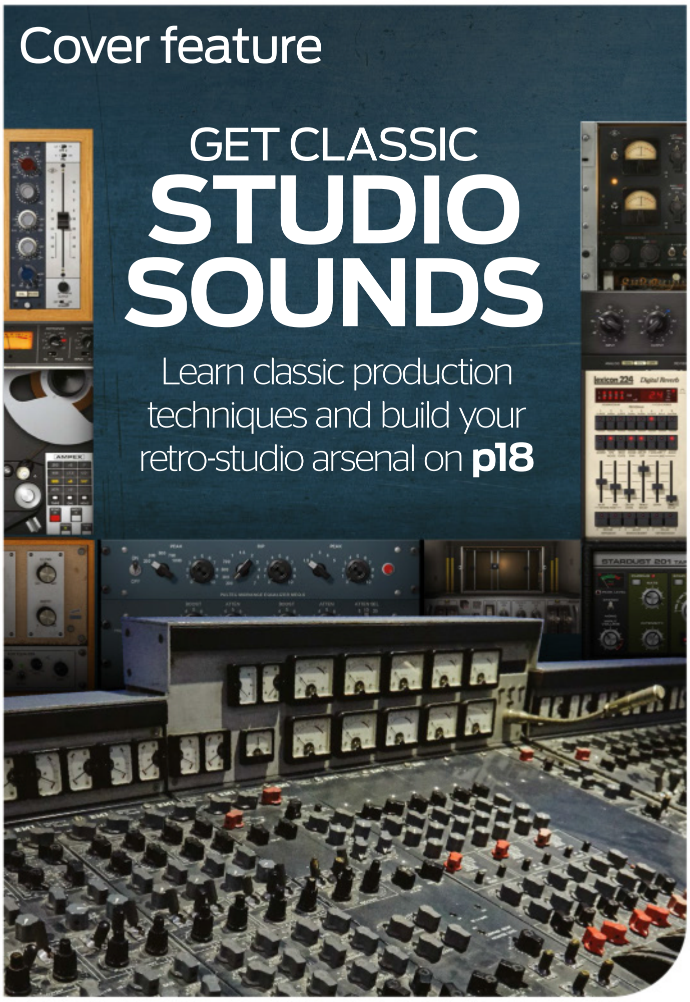

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ACUSTICA FIRE: THE CM COMP

We explain how to get the best from your exclusive CM plugin from Acustica

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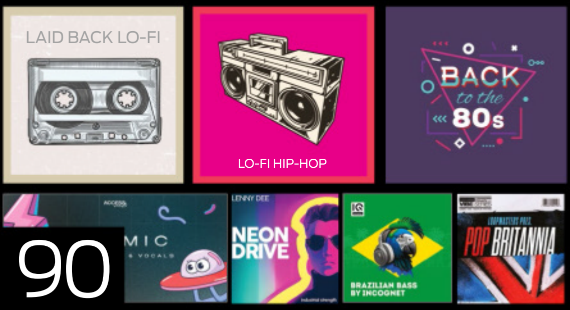

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THE LO-FI COLLECTION

This month, our in-house sample makers take things slow and crackly with two new sample packs. Plus, back to the '80s!

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MASTERCLASSES

Follow along with our in-house experts as they guide you through their top tips for mixing and synthesis

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More than 80 plugins for free. All you need to get started in music production! Learn more about the suite in this PDF

cm/news

NEW RELEASES > COMMENT > INDUSTRY HAPPENINGS

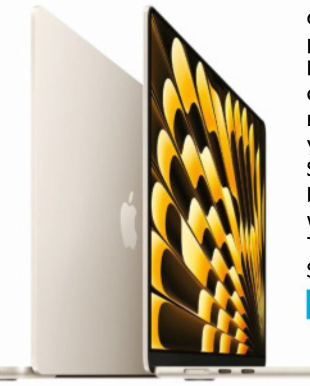
Mac daddy

Apple's new desktop and laptop options could speed up your studio, and completely empty your wallet...

> Over the last month we've lost count of the number of slightly nerdy, slightly worried and occasionally breathlessly giddy conversations we've had about Apple's Vision Pro. This AR (and potentially VR) headset essentially straps a series of floating visual UIs to the face, and allows wearers to swipe, pinch and caress windows that float in front of the eyes, aiding the navigation of daily tasks.

While Vision Pro is still in its relative infancy, the potential implications for software music producers once its SDK is rolled out could be huge, with developers already pondering the types of weird and wonderful arrays of augmented reality DAWs that we could be immersed in over the next few years. While all eyes (no pun intended) were fixed on this unique new product, Apple also presented its newest computer models for 2023, including the 15-inch MacBook Air and the upgraded Mac Studio. There's also the new Mac Pro, a computer so powerful that some kind of 'Do you really need this? licence' should be required if you want to buy it.

The 15-inch MacBook Air is, as you might have guessed, a larger version of Apple's entry-level laptop. A Liquid Retina display actually measures 15.3 inches, and there's an M2 processor inside. As with the smaller model, there's no fan, which ensures silent operation. Apple also promises up to 18 hours of battery life. Price-wise, it weighs in at $1,299/£1,399.



The upgraded Mac Studio is now available with the new M2 Ultra chip, which Apple says is the largest and most capable it has ever created. This supports up to 192GB of RAM – 50 percent more than the M1 Ultra. You'll also find this chip in the new Mac Pro, which becomes the final Mac to make the move to Apple Silicon.

Prices for the new Mac Studio with M2 Ultra start at $3,999/£4,199, while the base price for the Mac Pro is $6,999/£7,199. Undoubtedly, any of these brand-spanking new options would serve as capable production hubs, but in all honesty the vast majority of computer music-makers won't really need this much power. If you're in the market for a Mac Studio, a much more affordable bet would be the M2 Max model, which starts at $1,099/£2,099. There's also a new macOS – Sonoma – right around the corner.

www.apple.com

Give your DAW some Love with Tracktion's instant ambient plugin

I love your, Love Tracktion

What your DAW needs now is Love, sweet Love. That's certainly what Tracktion Software thinks anyway, as it launches a tenderly-titled new 'instant ambient' plugin. Developed by Dawesome, the core elements of Love are a shimmer effect, a granular engine and a sci-fi-leaning reverb. The shimmer element comprises a reverb and parallel pitchshifters.

You can use the granular engine to slice, dice and rearrange your audio, and then process it with timestretching, pitchshifting and granular synthesis features. There's also the Clouds reverb that can be used for additional ethereal ambience. Love can be trialled free for 90 days, and is currently available for the introductory price of $36 (regular price $60). It runs on PC and Mac in VST/AU formats.

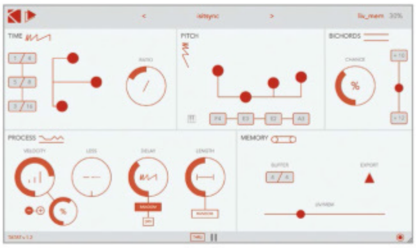
www.tracktion.com

App watch

We report on the latest developments in phone and tablet music making

Coast to coast

Ruismaker's new 'complex oscillator' synth Hilda, released on iOS, melds the ethos of West Coast and East Coast synth culture in a unique package. The synth app features a wave folder, a 12-mode filter (based on an Oberheim Xpander), a low-pass gate and a slew of modulation abilities. Hilda has been circuit-modelled to exude both analogue and digital character. It also features a DIY lo-fi delay circuit emulation and a 16-step MIDI sequencer with a custom scale. Handcrafted by Bram Bos, it's available for $12.99/£10.00.
www.ruismaker.com



Tit for TATAT

A new MIDI FX designed to create 'always-changing sequences', the TATAT can concoct infinite, ever-changing note patterns based on a mood, input by you. The generative results can then be modified by using the Less and Ratio controls (which control how the app generates intervals). You can also add delays, length variations and randomisation, as well as mute certain notes. This fascinating little vibe-maker is a AUv3 that works within iOS-based DAWs, and is available now for $6.99/€6.99.
www.k-devices.com

A new dawn

We always love ways of turning our iPad into a beat-maker, and with Dawnbeat from Luis Rivas you can tap out rhythms, edit samples, and sequence patterns creatively. Its iPad-tailored features allow tapping and swiping to translate into more natural-sounding beats. There are four pad modes: monophonic, polyphonic, MIDI OUT, and AU Instrument. This final mode allows you to import your own AU plugins or harness 12 in-built effects. It's free to download, while an in-app purchase of $9.99 unlocks more content.
www.dawnbeat.com

10 years back

Our monthly shake-of-the-head at our earlier selves' news choices...

While a vast number of things can happen in a decade, a firm fixture of this magazine – beat-making – was every bit as important in 2013 as it is today. In issue **cm**194 we used a series of laboured boxing puns to emphasise our 'heavyweight' guide, complete with dancefloor-angled production tips and a section focused on that omnipresent early 2010s genre, dubstep.

> "The next few decades will see improvements in software," he predicted... He wasn't wrong

We spent some pages digging deep into Reason, then in its seventh evolution. It was a moment where more developers were beginning to make bespoke rack devices. It also introduced sliced audio editing, now a staple of the DAW's sample editing workflow.

We also bemoaned the over-saturation of third-party mixing plugins, when the latest DAWs seemingly had everything we could ever need for that purpose. "I don't think improvements in audio processing will ever stop," DMGAudio's Dave Gamble presciently told us. "In this regard, software has surpassed hardware now, so the next few decades will see interesting improvements in software." One of those decades down, and he's certainly not been disproved yet.

cm194 packed a punch with our beats special

We are family

Previously announced as the launch of a new umbrella company called Soundwide, last month, Brainworx and Plugin Alliance were officially declared to be joining iZotope as part of Native Instruments. By way of explanation, the bosses of the company formerly known as Soundwide are now saying that they're moving forward with the NI name on the masthead because it's "more familiar to our community," which is certainly true. This is more than just a rebranding exercise, though. In the future, you can expect to be able to use one login across all the brands, while NI's Native Access will become the preferred destination for installing products from across the brands' portfolios, negating the need for multiple similar tools. We're promised a "one-stop shop". You can expect to see this rolled out later in the year.

www.native-instruments.com

Ins & outs

HUGS ALL ROUND
We learned the heartwarming story of Brian Hug, a 78-year old man who, following COVID-related unemployment and depression, began making electronic music. "I don't think there's many other 78-year-old people making modern dance tracks," Hug said.

OUR NEW OVERLORD
The AI 'music production expert' Cosm Bot has been trained on hours of tutorials and promises to answer any question a budding music producer might have. It's learned a lot from Ableton Certified Trainer Tom Cosm so expect a Live bias, and expect us out of a job...

LENNON'S ON SALE AGAIN...
Paul McCartney recently confirmed that a newly produced Beatles song, *Now and Then*, will soon see the light of day. John Lennon recorded the demo in 1979, and his rough vocal has been cleaned up by the very same frequency-isolating algorithm used in *Get Back*. Fab!

GET A (SKRILL)EXTINGUISHER
In early June, Skrillex was forced to abandon his Primavera Sound festival set for ten minutes after a lighting rig seemingly caught fire. The festival said a 'small technical error' had taken place, while Skrillex presumably queued his 2012 banger *Make it Bun Dem*.

MOOG: THE NEXT GENERATION
In other family-building news, Moog revealed that it had joined inMusic, the music technology super-company that is also home to Akai, M-Audio, Alesis and a lot more. Teasing at cross-pollination, we wonder if we're about to see a Moog with MPC-flavoured pads?

AND THE AWARD GOES TO...
The Recording Academy have announced new rules for AI's inclusion in the Grammy Award nominations. "We are going to allow AI music and content to be submitted, but awards will only go to human creators." Expect outcry from disgruntled AIs.

SOUND PARTICLES

NEW VERSION 1.1

SkyDust 3D £232

Spatial Synthesizer

For those who haven't heard about SkyDust 3D, it is the newest **spatial synth** of Sound Particles. A synth with 3D panner controlled by MIDI, LFOs, EGs, Sequencer and much more, allowing you to create fantastic results in stereo or spatial. With support for more than 30 output formats, **version 1.1** is **now available with:**

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- **Performance Improvements**
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"

SkyDust 3D is a game changer - something I've been waiting for such a long time.

Jean-Michel Jarre

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Density £69

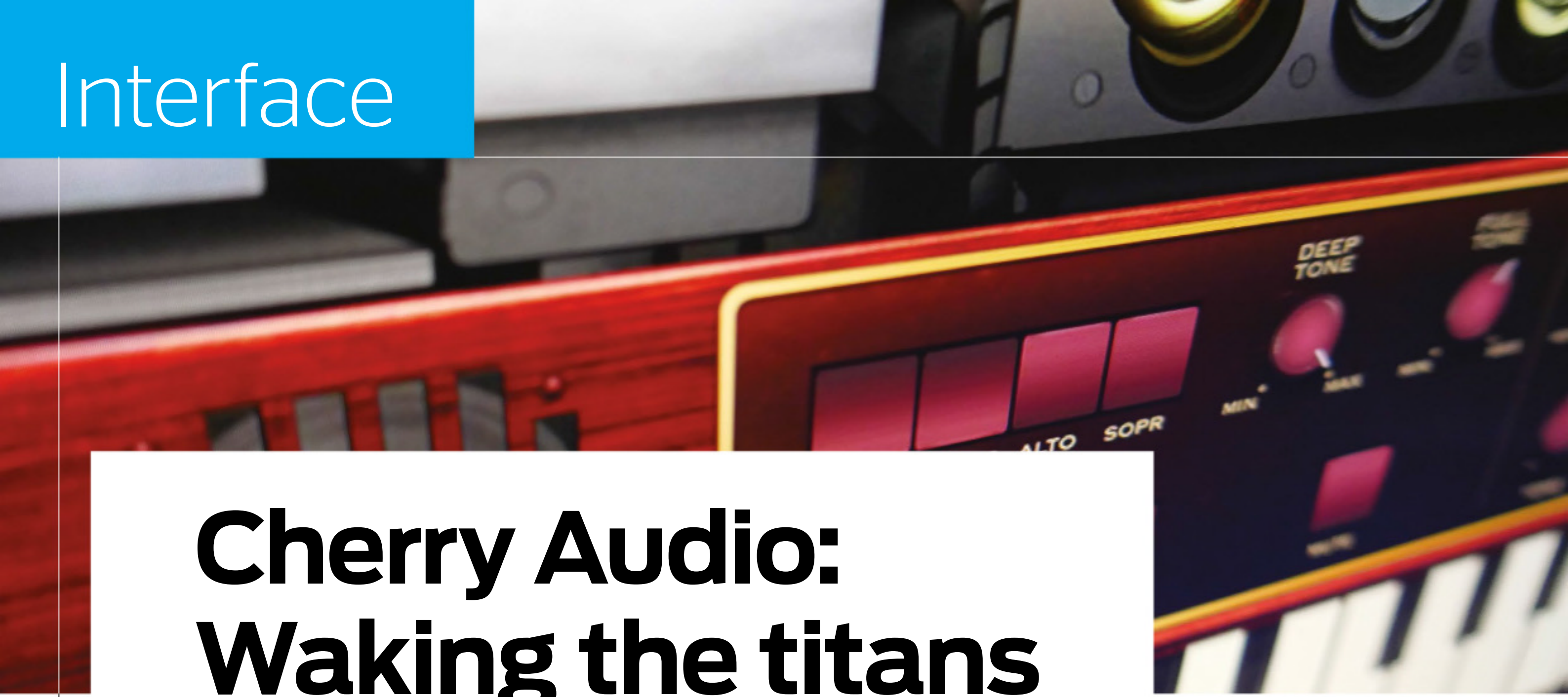
This plugin creates ensemble-like sounds by using particles systems, granular synthesis and stereo/3D panning.

Energy Panner £28

A panner controlled by the intensity of the sound, allows you to create organic movement, bringing life to your mixes.

Brightness Panner £28

This plugin analyzes the sound's brightness, pitch or MIDI notes to control its movement automatically - panning controlled by frequency.



Cherry Audio: Waking the titans

Founded in 2018, Cherry Audio has become one of the most beloved softsynth creators, recreating yesterday's legends virtually. We spoke to CTO Dan Goldstein to find out more about the company's latest release: Novachord + Solovox

Cherry Audio
Dan Goldstein

cm: The Novachord + Solovox collection revives two legendary harbingers of the modern synth and brings them to the desktops of 21st century music-makers. Why did you decide to go that far back?
Dan Goldstein: "If you're the sort of person that loves the art of synthesis, and you're obsessed with the history of synthesisers, then you simply have to be fascinated by the Novachord. It's a fully-polyphonic synthesiser with filters and envelopes that was designed nearly 20 years before the word 'synthesiser' even existed. There are some fascinating engineering achievements in the Novachord, and we loved the challenge of recreating its unique tone and character. I love that our customers never know for sure what Cherry Audio will do next, and we really enjoy occasionally exploring history's weirder and more esoteric electronic instruments."

What unique characteristics could these classic instruments bring to modern productions?
DG: "The sound of the Novachord is incredibly unique, and isn't something that can be recreated with most modern synthesisers. Every note has a unique combination of tube-driven divide-down oscillations, an adjustable brightness filter, and a primitive-but-unique envelope. The entire mix is run through a set of low-pass, band-pass, and high-pass filters (a predecessor to Moog's fixed filter bank), and the complete mix is played through a pair of dark-sounding 85-year-old field-coil speakers which have a unique sizzle. The tone of the speakers and the acoustic room is a huge part of the Novachord's sound, yet every Novachord sample library that we've encountered has been recorded dry through an added line output. Because the modern notion of a synthesiser was still decades away, the controls and filters of the Novachord are tailored to creating quasi-organ sounds, orchestral-ish tones, and sort-of-piano-esque plucks.

"The Solovox is a monophonic derivation of the Novachord sound technology, but with the ability to stack octaves to create more complex tones, and be able to select between a saw-like wave and a square wave. It's quite adept at emulating brass and woodwind sounds.

"We've expanded on the feature set of the Solovox a little further by making the band-pass filter frequencies adjustable, adding glide, and adding a release phase to the envelope generator, but as always we've been careful not to stray too far from the original design.

"Both of these instruments offer sounds that are sometimes eerie, sometimes moody, and very occasionally cheesy, but which are dripping with vintage nostalgia and familiarity. Whether you know it or not, you'll have heard these sounds in countless classic movies and sci-fi television shows. Both of these are definitely great choices if you're looking for unique timbres, and when played through phasers and delays (or other wonky modulation effects), they can be transformed into something altogether otherworldly."

Cherry Audio's Novachord is based on the revolutionary polyphonic instrument from 1939

Did the software modelling of these instruments provide any more (or less) of a challenge than the more recent instruments? And was it difficult to get hold of the original units that you used for the modelling?
DG: "Solovoxes are more common, but it was nearly impossible to find a properly working Novachord! In fact, this release was delayed by many months while we reached out to our network of contacts to try to find a working example – some say that there may be fewer than six fully-working Novachords on the planet. In the end, we located a beautifully restored Novachord in Indiana, and we worked tirelessly on our model to capture that instrument's unique character. Mark Barton, who crafted the DSP on Novachord + Solovox, reads schematics the way most people read mystery novels, and he worked tirelessly to understand exactly how the Novachord generates its waveforms. The circuitry of the Novachord, built around a network of 163 vacuum tubes, and can't help but create unique tones. Every instrument we recreate involves a ton of time-consuming modelling work, and this can be tedious and challenging, but simply put, we love and respect these instruments, and we are driven to get it right."

Are there any other instruments of this era (or earlier) that you'd be interested in emulating digitally?
DG: "Most early electronic instruments were not keyboard based, and don't really translate well to being controlled by a modern MIDI keyboard setup. For example, it would be very difficult to realistically play a virtual theremin with a modern keyboard, and it wouldn't be much fun to play it with a mouse. It is possible that some MPE controllers might get us closer to the experience of playing something like a Tannerin or Ondes Martenot, but without a dedicated hardware interface, most early electronic instruments just don't lend themselves to software emulations. Some, like the Telharmonium, were keyboard-based, but every Telharmonium recording is over 100 years old, so it is essentially impossible to really know what one sounded like. Plus it weighed 210 tons, so it's not like we can get our hands on one."

Earlier this year, you released the Mercury-6, an astounding Jupiter-6 emulation and one of those synths that has spanned numerous genres. You added more aspects to its original capabilities, such as per-layer stereo panning, and extended polyphony amongst other things. Is it tricky sometimes to walk the line between sticking to an accurate emulation and enhancing the instrument further?
DG: "It's the hardest part of the job! It can be such a temptation to look at an instrument like the Jupiter-6 with 40 years of hindsight, and want to upgrade everything about it. Wouldn't it be better with a third oscillator, and more powerful LFOs, and a sequencer, and more filter modes, and on and on and on... But we've learned that it's easy to lose everything that makes a classic synthesiser unique by going overboard. These instruments are so much more than just the tone of the oscillators and the character of the filters. The shape and limits of the envelope generators, the patterns offered by the arpeggiators, the modulation routings and depths, all contribute to the sound and character of a classic synthesiser. Often the limitations of the instrument add just as much to the experience as the feature set does.

"With Mercury-6, we were very careful to stay true to the capabilities and character of the Jupiter-6. We did add velocity support to the envelope generators, as we often do, and we did add a couple new features to the main LFO, including the ability to sync it to tempo. We expanded the split capabilities by adding a layer mode (as found on the Jupiter-8), and we even added a chord mode and a few other minor changes, but by and large, none of these features take away from the character of the Jupiter-6, and they can all be turned off if these additions are unwanted.

"Even the comprehensive effects section that we've added can be completely bypassed, for anyone looking for the most authentic Jupiter-6 experience. But quite a lot of the unique features found in Mercury-6, such as glissando glide, stackable waveforms, multi-mode filters, solo and shared unison modes, oscillator cross modulation, and invertible envelope polarity, were all originally found on the Jupiter-6. It really was a remarkable synthesiser, and it doesn't always get the credit it deserves because it is so often overshadowed by the Jupiter-8."

The Mercury-6 is an astounding resurrection of the remarkable, and sometimes underrated, Jupiter-6

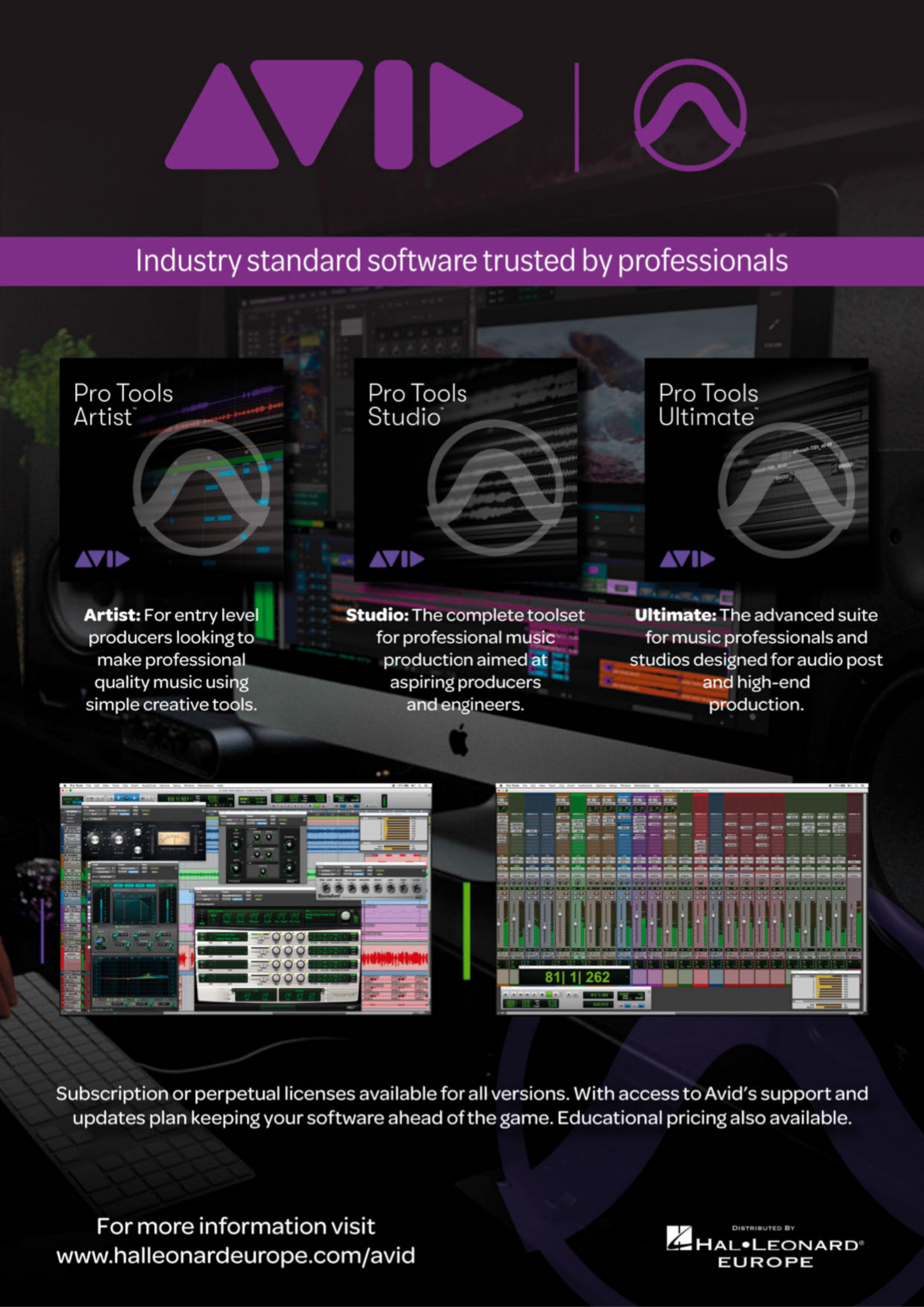
"With Mercury-6, we were careful to stay true to the capabilities of the Jupiter-6"

Even though it's a relatively new company, Cherry Audio has become very highly regarded in the softsynth world. Where would you like the company to grow next? And what do you say to those hardware purists who reject the very notion of software synthesis?
DG: "We are working on so many exciting products, and I can't wait until our customers can hear what we're building! We are currently hard at work building instruments that won't be released for six months or more, and we have all sorts of plans for products well into next year. Everyone has a favourite vintage synthesiser, and our customers are always letting us know what synthesisers they'd like us to tackle next. We've had a lot of fun creating original synthesisers, like our Sines and Dreamsynth instruments, and we have a new original synthesiser concept in development that we're extremely excited about.

"Our customers often ask for vintage drum machine emulations, and we've had discussions about how to put the Cherry Audio spin on some beloved classic drum boxes. Perhaps we'll even create our own original drum machine in the future! We're having a lot of fun, and we'll continue on this path as long as our customers and fans continue to support our efforts.

"As for the hardware purists, all I can say is that Cherry Audio's developers and designers adore hardware as much as anyone. Between us, we've collected well over 250 vintage keyboards, synthesisers, drum machines, and musical oddities over the past three or four decades, and we spend way too much of our free time repairing and restoring these instruments, sourcing rare parts, and hunting down more vintage synthesisers. Our goal has always been to make these rare and wonderful instruments accessible to everybody, and we're extremely proud of the products that we've built. Cherry Audio may be a young company, but our team has many decades of experience creating professional music software, so we're certainly not new at this. Cherry Audio's instruments truly are software emulations created by hardware purists, and we've always been our own toughest critics. I sincerely hope that the love and attention that we put into these products shines through for everyone that plays and enjoys them."

For more, visit www.cherryaudio.com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15 questions with...

Shida Shahabi

Photo: Märta Thisner

With a stripped-back production process but a heavyweight sound that mixes electronic processing and classical textures, Shida Shahabi is claiming her own calm space in music. It's an approach that means largely ignoring outside influences, 'best practice' and orthodox methods. Perhaps it's an ethos we can all learn from...

> Shida Shahabi's music is an eclectic mix of vast piano and cello sounds with mesmerising, textured drones. It's subtle, unhurried and spacious, probably a far cry from her background, raised as she was by Iranian parents during the '90s in Stockholm with a soundtrack of Persian pop, punk and grunge. Shida would eventually veer towards the darker, deeper and arguably more thoughtful leanings of The Cure, Cocteau Twins and My Bloody Valentine, as she strove for her own sound. Her 2018 debut release *Homes* was warmly appreciated by critics who described her as 'a bold new voice'. She now has a stripped-back approach to her music which is matched by a minimal studio setup. Shida believes we could likely all finally finish those tunes if we just flexed that finishing muscle a little more. Here she details how that lightweight production process can lead to a heavyweight, emotional sound. She also expands on how to embrace the unknown: "that vagueness can sometimes surprise you, I appreciate it when I don't entirely know where it is heading…"

1 Tell us a little about what you do and your musical background…

Shida Shahabi: "I work as a composer and musician, and am based in Stockholm where I was born. I've been singing and playing piano and keyboards since I was about nine. I got a Yamaha keyboard from my aunt around that time, too, which gave another level to my interest and I started spending more time playing. That instrument had a built-in drum machine and some fun presets, which was mind-blowing for me at that time. I picked up a big interest in listening to music and going to concerts as a teen, spending a lot of time looking for records, making mixtapes and finding new music. I started playing with others when I was about 20, mostly for fun. But it started becoming a paying job and something I took seriously when I was 24. I am now almost 34 and I just keep on doing things, hoping that I will be able to continue for a long time."

"I could make it more strange-sounding in a way that I hadn't been able to before"

2 When would you say you started to become successful, making a living from music?

SS: "Ten years ago when I started freelancing as a musician. The practice took more space in my life then, and I suddenly had the time to think about what I wanted to do. It took a while for me to find my own way of doing music seriously; it was a struggle for a long time. So I focused on finding commission work in theatre and dance. The work became a bit more practical with collaborations and deadlines, and I could set the self-criticism aside and focus more on the practice of music making."

3 What is your overall philosophy or approach when it comes to music?

SS: "It's hard to pin down in a simple way, but curiosity, playfulness and spontaneity are very important for me when doing music. Even if it can get frustrating in a process, I appreciate it when I am writing/playing and I don't entirely know where it is heading. That vagueness is something that can surprise you in the results you get. Not always in a great way, of course, but there are times where it can really create wonderful worlds of sound."

4 When did you discover the route to computer music making, and how has it changed the way you work?

SS: "I discovered it when I studied in art school. I had been working with hardware (effect pedals and instruments), but this was something different. It was a slow and long process of just understanding what the different effects and tools did to a sound. That really changed my perception of how one could manipulate sound and how to produce things. I could tweak and focus on specific things and make it more strange sounding in a way that I hadn't been able to before."

5 Tell us about the gear in your studio.

SS: "I'm trying not to have a lot of stuff, to be honest. It has a way of distracting me, when too much stuff is around. I prefer to keep my studio spacious and bright. Luckily I've been able to borrow things when I am in a phase where some specific gear is needed. I have a Roland Juno-60, a Korg Poly 800 and Yamaha CS-01, which are used often in the studio. I also have my 120-year-old Malmsjö piano and a Roland RE-501 tape echo that I use pretty frequently, too."

6 There's some great, classic hardware in there. What about your favourite plugin instruments and effects?

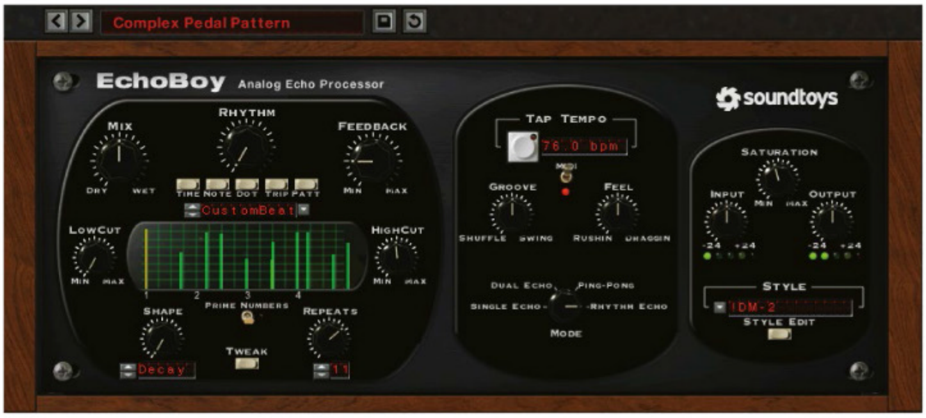
SS: "I like **Kush Audio's Electra DSP EQ**. It gives a nice colour and warmth to the sound. It just makes things sound clearer and fuller, and gives it a certain touch.

"I like using the software version of **Pultec EQP 1A** a lot, too. It gives a nice presence both in the low- and high-end registers and it can enhance really nice airy frequencies in sounds in a way that I like.

"**Wavesfactory's Cassette** simulates tape erasures and compression really well and can create a nice, distorted quality. I use it

Shida swears by Wavesfactory Cassette and Kush Audio Electra DSP EQ for tape distortion and warm analogue colour

iZotope RX 10 is Shida's noise-filtering tool of choice: "It's like Photoshop but for audio"



Soundtoys EchoBoy is Shahabi's favoured wide-range delay

T-Racks EQP-1A – "It gives a nice presence both in the low- and high-end registers"

sometimes when I want more grit and don't have the possibility or time to send it out to machines. It's a fast way to hear if the material resonates well with tape distortion, noise and erasures.

"**iZotope RX 10** is great. I am not a fan of recording in dead acoustic or too isolated rooms, but I also like recording silent material. So I sometimes need to filter unwanted sounds away. It's also great for editing field recordings. It's like Photoshop but for audio.

"**Soundtoys EchoBoy.** This wide-range digital delay plugin can give a really nice touch to things. It's also quite varied in how it can sound and you can also be very detailed with it."

7 Do you ever collaborate with other producers?

SS: "For my new album *Living Circle*, I shared a lot of the process with Hampus Norén. He mixed my previous records, but this time we did a collaboration around the recording and production. We're different in some ways in how we work and very alike in other ways, but our differences are good in the studio, and it's fun to listen to things together with him. Hampus is also a musician in the new live set up for *Living Circle*. Other brilliant musicians who were a part of the album were Linnea Olsson on cello, Gus Loxbo on double bass and Julia Ringdahl, Nina Kinert and Sara Parkman on vocals. I didn't have many days with the musicians, but those days were crucial for the outcome. I also went to Berlin to mix with Francesco Donadello. Francesco who mastered my previous releases *Shifts* and *Lake on Fire*, and I wanted to expand my collaborative realm and work with him more but in an earlier phase. He has done such nice work with the mix."

> "I'm not good at finishing a track. It's like a muscle that you become more and more familiar with"

8 How do you tend to start a track?

SS: "That varies so much for me. It could be a melodic phrase that sticks and gets altered or developed, and then the other layers come quite naturally. Or it could be a drone recorded with a decided progression and then stuff that gets braided in. I've also played and written things on top of field recordings."

9 While your process seems very organic, how do you ultimately know when a track is finished?

SS: "I'm not good at finishing things. But I am getting better at it; it's getting easier. It feels like a muscle that you become more and more familiar with. I think I'm pretty detail-oriented, and I am working on not focusing too much on the details. You gain experience and develop some kind of intuition after going through several recording processes. And if you have small regular breaks, you can have a healthy distance of your perception to the material. Then I think you know when there is not much more to do."

10 Can you talk us through at least one of your production tricks or processes…

SS: "I don't know if it defines my sound over others, but I like looking for details and characteristics of an instrument or sound when I am in a recording process. I use EQ a lot as a magnifying glass, trying to find and get those details that I find interesting. So I try to figure out the characteristics of a sound and what I find interesting with it pretty early on. I don't always work like that though. I also like setting things up fast and without thinking so much. I think it depends on what I'm recording and what the material is."

11 What's on your gear wishlist?

SS: "I just moved out from a collective studio where we had a lot of fun gear. It was almost too much for me, with all of the stuff that we had there. But the things I miss in my studio now, that I use quite often, are a Lexicon 480L digital reverb and a nice tape machine which has varispeed."

Photo: Beata Cervin

12 **What would you like to see developed in terms of production technology?**
SS: "I can't really think of anything specific at the moment. Maybe things like that usually come up when I am in an intense production phase. And once those are over, I forget what it was that I felt was lacking!"

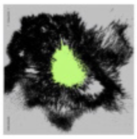
13 **Which track do you wish you'd produced and why?**
SS: "Maybe *Disappearing* by Low. I love that distortion. That entire record is amazing. Otherwise, I don't know really. I am listening to a lot of Gregorian chant at the moment."

14 **What's the best advice you've ever been given by anyone for playing live?**
SS: "For live work, don't over think it; that is when you start overplaying or lose focus. Just enjoy playing. Playing live needs a pretty anchored mindset, so for me it usually helps to focus on the music and the fun and the excitement. Just don't be in your head too much. In terms of working in the studio, just do things and be stubborn. It takes a lot of work and a lot of will to finish a record. Try to find out what you get drawn to in the studio, but don't over think or refer too much to other stuff. Sometimes it's good to just stay in your own bubble."

15 **What else do you have planned for the future?**
SS: "I am playing more European shows this autumn – they will soon be announced. The live set will be a bit different this time. We are now three on stage and I'm hoping to be able to work with local vocal ensembles when performing the *Living Circle* set. I am also excited about working on some new material." **cm**

Living Circle *is out now. Shida notes: "I am genuinely happy with the record, and really enjoyed the process of it. It's dark, light, colourful, slow, distorted and soft. It is a lot. I hope people will enjoy listening to it."*

HEAR MORE



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Classic sounds & vintage techniques

FOR THE 21ST CENTURY PRODUCER

Classic music production techniques and gear can breathe life and humanity into your digital productions. And it's cheaper than you might think. In this feature, we're going to look at some of the finest vintage plugins out there, and learn how to get revered sounds for free with the cm Plugin Suite

> To say music producers are a fickle bunch is a massive understatement. During the 1980s, for example, we spent years trying to ditch analogue synths and replace them with beautiful, clean digital synths. Then, after we got what we wanted, we decided we didn't want it after all. The result? Analogue synths are now bigger than ever. Those digital synths have been confined to the Mordor-like wastelands of foolhardy decisions.

The same can be said for the arts of music production and recording. As one generation fought against the limitations of the then-current technology in music making, the next is trying to recreate them. The 1970s and '80s were largely about reducing tape noise and hiss and increasing track counts to the hundreds. We'd do anything to cut down the noise between tracks while increasing said tracks to 16 or more! Now, it's all about adding analogue 'character' back into music. And production – certainly in the field of pop anyway – has become more about creating one big 'wow' sound rather than multiple tracks of 'meh'.

And, really, this somewhat jarring attitude to music production is great; a result of having all of our cake, eating it, and still not being satisfied. With pretty much any DAW on the market today, you get everything you could possibly need to make music. Unlimited tracks, countless instruments and effects and way too many options. But we've realised that this utopia is not quite what it seems. Endless tracks? Endless plugins? Endless perfection? No thanks.

We've remembered that humanity and soul is a big part of music production and that, actually, the limitations and character of classic gear gives us that; not unlimited track counts and plugins. And while dwelling on the past might look petulant (like a small child rejecting a big cake) it has to be commended. It shows that we are *thinking* about music production rather than just blindly using the tools at our disposal.

This feature takes that maverick spirit to investigate several classic production techniques and the gear behind them, and explores how they can still be ultra valuable for the 21st century producer. Over the next 18 pages we'll cover the vintage gear, how it's been emulated in plugin form and how you can use it in your music today. And we'll even explore some free options with our very own cm Suite. Learn from history to create for tomorrow, someone might have once said…

Vintage tools, modern techniques

Classic recording techniques require some vintage tools. Here we look at why some of these EQs, compressors, reverbs and tape machines have reached legendary status, and how you can use and access them today

Really, it's the wealth of tools at our disposal that has made 21st century producers perhaps a bit too complacent. Getting back to that synth analogy, why bother recreating a sound when there are literally hundreds of presets done for you? It's the same with mixing. We have perhaps lost the 'how' and 'why' in favour of 'just load another plugin'. This feature is about paring things back, looking at classic production techniques and vintage gear, and going back to basics. But first, why that gear was so vital in the first place...

Musical mishaps

There's a big argument that some of the classic gear used in the production techniques that we're going to discuss became famous through misuse, happy accidents or their own idiosyncratic sonic character.

Starting with EQs and compressors, they were both intended to do fairly simple jobs. Compressors were initially designed to bring some evenness to recordings back in the '50s and '60s, to tame erratic vocals or other instruments. EQs would be designed to boost or cut certain frequency ranges, and that's it. But a lot of vintage EQs and compressors imparted a special colouration or sound on a track, not something that was particularly asked for at the time, but that the electronic circuitry naturally generated. Before long these old pieces started to be used just for the sound and not necessarily their original intended purpose.

The UREI 1176 compressor is a case in point. It delivered a bright, energetic sound and was used by producers including Bruce Swedien when recording Michael Jackson. The same compressor also has a famous 'all buttons in' mode, an almost accidental find which results in more distortion for bass and guitar. Some producers even used this unit, and other pieces of vintage gear with its original function – in this case compression – disabled, just to get the crispy sound of the hardware.

> Some classic gear became famous through misuse or as a result of happy accidents...

For EQs we have a very similar story with the Pultec EQP-1A. Here's another piece of classic hardware where simply running your signal through it will give your sound a hard-to-define extra sauce. And it too has a classic 'shouldn't do that' trick. This time it's the famed Pultec 'low-end trick' where the low end can be boosted and cut at the same time. Because of the circuitry in the original machine, rather than the boost and cut cancelling one another out, it actually delivered a new EQ curve that delivers a much tighter and more characterful low end.

Character study

With other gear, it's not so much about misuse, but simply goes back to that undefinable analogue character that it imparts. Channel strips that replicate the input channels of classic

mixers, for example, deliver this in spades because they will typically include preamps, EQs and more. Very often they will emulate certain classic mixing desks like API, SSL, Amek, Neve and many more. Again, in some cases, it's simply a case of running your audio through these plugins just to get an essence of what the original hardware delivers; the objective here is essentially replacing the digital sterility that your DAW-oriented approach can sometimes result in, and imparting some colour, maybe a mild dose of saturation for some very light distortion, or even some hiss. Which brings us nicely to tape.

At the other end of the recording chain, there used to be a monster of a multitrack tape recorder rather than a hard drive. These machines were made by the likes of Studer, Ampex, Sony and TEAC and, you guessed it, each had its own individual character that it would coat itself on the recordings. It wasn't just about hiss, but mechanical byproducts like wow, flutter and mild saturation. So dramatic is the character that machines like these deliver, that you'll find today's top recording studios still proudly decked out with the originals (the corridors in Abbey Road, for example, are littered with them).

Vintage reverbs are split between pieces of classic hardware made by the likes of EMT, Lexicon or AMT, or actual physical plate reverbs – large plates used to create the reverb effect – or actual spaces used on classic recordings. Abbey Road (again), for example, still has (and uses) both iconic chamber spaces used in Beatles recordings and plate reverbs.

Luckily, all of these pieces of vintage equipment or spaces have been emulated by companies including Arturia, Slate Digital, Universal Audio, Waves, Softube, Roland and many others. We'll dig into some of the best ones in our roundups over the following pages. However, you should be able to apply all of our techniques to any emulation made by any company. Where possible, we'll add some plugins from our very own suite of effects and instruments (see box, right) or freeware, so you need not shed any cash at all.

All set? it's time to go back in time to explore some of the vintage techniques that you can bring to your modern productions today.

The cm Suite

Over the years we've given away many plugins with *Computer Music*. The best, though, aren't just given away with one issue of the magazine but reside in the 'mighty' *Computer Music* Plugin Suite. This now comprises more than 80 free instruments and effects for PC and Mac (plus the odd Linux offering). Within the suite are some excellent vintage emulations and we'll include some of these in our tutorials to lessen the need to pay out on new plugins to enjoy our classic techniques. What are some of the highlights of the vintage side of our suite? Well, Ignite VST **Vice One**'s compressor is not necessarily modelled on any particular vintage hardware but will deliver similar results; and eaReckon's **CM-COMP 87** will also deliver a decent analogue, punchy sound. For EQs we have OverTone DSP's **Program EQ CM** which will give you a Pultec flavour; and Acustica Audio's **Pink CM** has an API-inspired classic sound. PSP Audioware's **cmDelay** and Ignite VST **Areena** deliver some classic delays and reverbs between them. And finally Shattered Glass Audio's **Inferno CM**, Sonimus' **Satson CM** and **Mercuriall U530 CM** are preamps that all feature some satisfying analogue saturation.

Universal Audio Pulteq EQP-1A and Ampex ATR-102 offer a software shortcut to their hallowed character

> Step by step

1. The Pultec 'low-end trick' to improve your bass and kick

1 > Load in a set of kick samples, four beats to the bar or something simple so you can hear some definition between kicks. Alternatively a simple bassline will do and demonstrate how this technique works. Now we need an emulation of the Pultec EQP-1A; fortunately there are loads out there.

2 > We'll opt for the IK Multimedia T-RackS EQP-1A as it has a really simple interface but does sound great. As you can see it is split into two main bands for low frequency and high frequency. We're concentrating on the left-hand side of the screen at the low end.

3 > Set the Low Frequency dial to 60 (it should also work at 30Hz but 60 is the most commonly used for this process) and set the boost level at this frequency to 6. As you will hear, it's almost too much, pushing the kick into distortion territory.

4 > But 'the trick' is to dial it back by using the attenuation dial at roughly the same amount as the boost. Because they are working on slightly different circuits the cut doesn't cancel out the boost as you would normally expect, but applies a different boost EQ curve which loses the distortion and leaves a more pleasing bump on the kick.

5 > As far as using freebie plugins go, our very own *Computer Music* Plugin suite comes with OverTone DSP's Program EQ CM, which is a great emulation of the Pultec. Here we have it running on a similar kick track in Ableton Live.

6 > We've set the low frequency to 30Hz and roughly boosted and cut this by the same amount with the left and right dials for the same kind of effect as achieved with the paid for IK EQ plugin above. And for free!

> Step by step

2. Perfect kick and snare with a Neve 1073

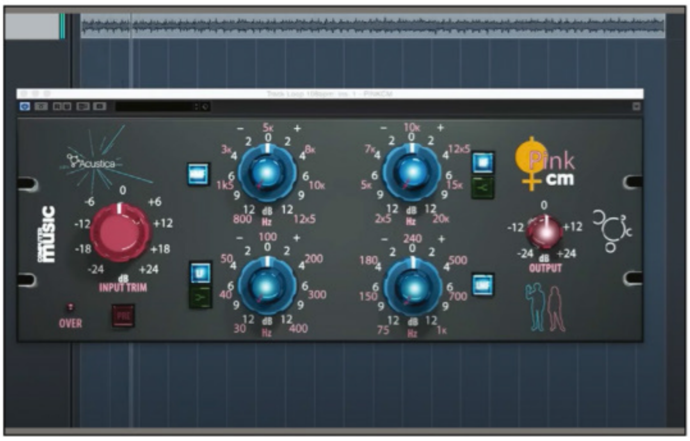
1 > The Neve 1073 is a classic mic pre and EQ and can be used to produce very tight kicks and snare sounds together, and very quickly. Here we've loaded in a simple kick-snare loop. Again there are loads of great emulations to choose from, but this time we'll go for the Arturia Pre 1973 Neve emulation…

2 > We'll start with the kick drum, so solo that track and apply some settings to the three main bands of the Neve emulations. Ignore the low shelf, go for 60Hz or thereabouts on the Low Shelf frequency dial. The difference shouldn't be too pronounced… yet.

3 > The Presence or hi-mid dial adds a surprising amount of snap to the kick and really makes a difference, so experiment here. We've gone for the higher value of 7.2kHz but this will depend on your initial kick sound. Now listen to the kick before and after by bypassing the Arturia; it should sound a lot more present and cut through.

4 > With the snare, the big difference is that you're going to bring in the high-pass filter at 50Hz at the bottom, thus taking all the muddiness away from the snare sound – and taking it away from the kick's frequency domain. Already they should sit better together.

5 > Dial up the Low shelf to between 110 and 220Hz depending on your snare sound. Moving to the Presence band, go for 7.2kHz but again, do experiment. Switch the bypass in and out to hear the effect.



6 > For freebies, the nearest EQ we have in the Plugin Suite is Acustica Audio's Pink CM (and Analog Obsession do a great 1073 freebie as part of its BritBundle). Try similar settings on your kick and snare; it won't quite give you the Neve sound but will get close!

> Step by step

3. Get the sound of vintage Abbey Road plate reverbs

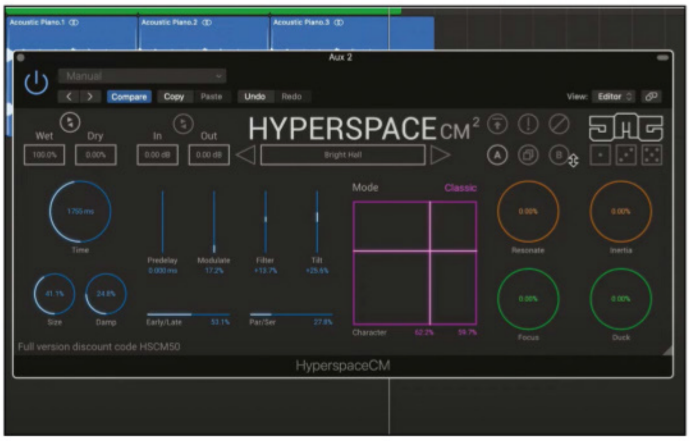
1 > Plate reverbs were the original – and very physically cumbersome – ways of getting reverb in music. Ideally suited to more convenient plugin emulation, there are many around as we see in our vintage reverbs roundup later. One of the best is Waves Abbey Road Plates which recreates the sound of the plates at the iconic studio.

2 > Plate reverbs are literally plates of metal vibrating thanks to a transducer 'playing' music onto the plate and the vibrations causing the resulting bright reverb. Abbey Road Plates emulates four different physical plate reverbs at Abbey Road. These have a different character with D sometimes favoured for vocals and the others for instruments, but it's a matter of personal taste.

3 > Plate reverbs will have standard reverb controls, although they may look a little different if modelled on the original '60s hardware. Here the input and output might look like they're going to beam you aboard the USS Enterprise but they simply set levels, and the Dry/Wet dial sets the level of the reverb.

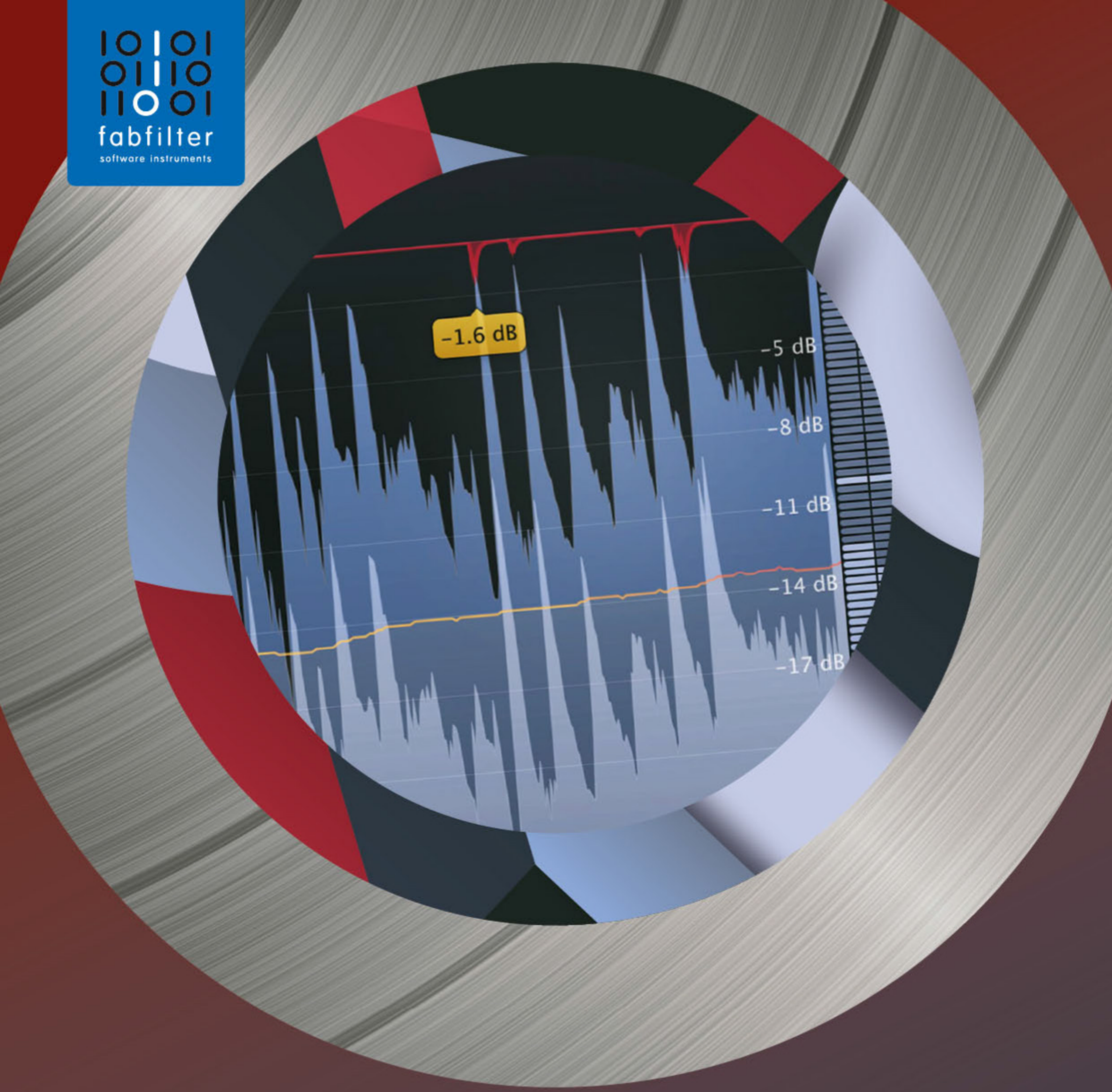
4 > Similarly the Damper level is actually just the reverb time; the higher it's set, the longer the effect. Predelay is standard though: the time between your input signals stopping and the first reverb reflection starting.

5 > Finally standard EQ dials let you shape your tone and the Drive dial adds some saturation, emulating the original amplifiers, while the Analog dial adds some noise and hum; the sound of the device's circuits, if you like.



6 > For free reverbs, TAL's Reverb 2 and Reverb 4 give you excellent plate reverbs. While our very own Hyperspace CM2 from the *Computer Music* Plugin Suite might not be for specific plates, it is flexible enough to give you similar results.

fabfilter
software instruments



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6 of the best classic EQ emulations

Some of the best EQ emulations on the market for adding an analogue sound and shaping your tracks

Universal Audio **Pultec Passive EQ Collection**

Mac/PC £299

Not one but three classic EQs. You can do the low-end trick with the EQP-1A, make mid-range tweaks and enhancements with the MEQ-5 and surgically remove bad frequencies (or even add a lo-fi effect) with HLF-3C. Or just run your audio through any of them for that classic analogue sound.

www.uaudio.com

IK Multimedia **T-RackS EQ 81**

Mac/PC €100

The sound of original Neve mixing desks is sought after and, like many classic consoles, has been emulated in software either as a channel strip or individual elements. This IK plugin takes the EQ from the 1081 console and beautifully recreates it for a DAW near you, including all the punch and presence of the original desk. A beauty.

www.ikmultimedia.com

Waves **PuigTec EQs**

Mac/PC $299

And while we're on a Pultec tip we should include Waves' version, their bundle of two 'Puigtec' EQs. As with the UA collection you get the MEQ-5 for your midrange but not the HLF-3C. However, this collection might boast a higher dollar price but Waves plugins are so often on sale that the original price is pretty meaningless. It's just 30 bucks as we write this, for example!

www.waves.com

Universal Audio **Neve 1073 Preamp & EQ Collection**

Mac/PC £299

There's little that UA hasn't touched in the world of vintage gear, and we just had to include an emulation of the original British Neve 1073, so why not just include a bundle that not only gives you that original EQ but a preamp too? The original 1073 is less about adding saturation or colour but more about lift, clarity and presence and it's all here in this fantastic emulation.

www.uaudio.com

Waves **API 550**

Mac/PC €249

Another entry for Waves, but these plugin experts do like taking a legendary piece of studio hardware and replicating it in exacting detail. This time it's the iconic '60s API EQ which was developed with the original company and delivers a 10-band graphic equaliser for more precise control over your frequencies. With switchable distortion, you also get optional vintage colour on tap.

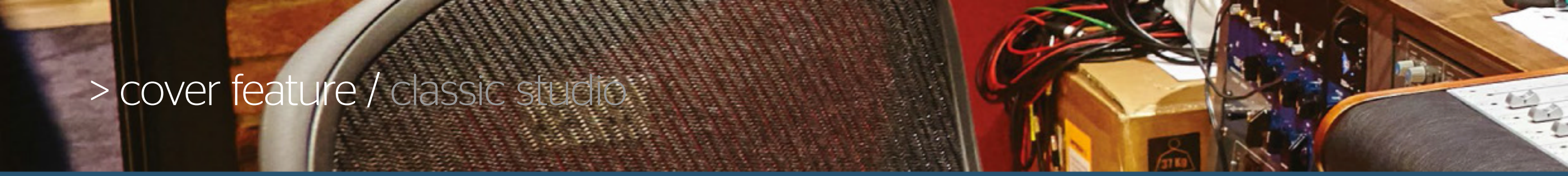
www.waves.com

Brainworx **Mäag EQ4**

Mac/PC $229

One of the less vintage and more modern EQs here, the original is found on recordings by everyone from Madonna to Black Eyed Peas. EQ4 is not transparent, it's an additive EQ that's used to add sparkle and 'air' to your tracks, with vocals in particular benefitting from its sweet character. Not cheap but currently on sale for just $40 here...

www.plugin-alliance.com



6 of the best classic compressor emulations

Compressors too can add colour by way of their 'analogue' circuitry but also bite and attitude…

Arturia 3 Compressors You Will Actually Use

Mac/PC €199

This set of compressors includes a rarer Gates Sta-Level emulation called Comp TUBE-STA which does a great job of adding extra body to low-mid sounds, bass-heavy drums and arpeggiated synths. You can get it on its own for €99 but an extra ton gets you great UREI 1176 and dbx 165A emulations too, so this could be all your compression needs in one purchase.

www.arturia.com

Softube Tube-Tech CL1B collection

Mac £174.99

As one of the few emulations of the original hardware – designed in conjunction with the original makers Tube-Tech – Softube's take is an exacting emulation. It's capable of both subtle containment and excellent audible colour, so use it as a standard compressor for taming signals or get some lovely vintage character.

www.softube.com

Universal Audio Teletronix LA-2A collection

Mac/PC £299

The official emulation of the original LA-2A is one of UA's oldest and best plugins and now comes as part of a bundle with two other versions. The original kept the signal character while performing dramatic compression, and these superb emulations also run native so no UA hardware required.

www.uaudio.com

IK Multimedia **Black 76**

Mac/PC From €80

A great emulation of the original UREI 1176, Black 76 works in IK Multimedia's T-RackS 'shell', and as a plugin in any VST/AU/AAX-compatible DAW. You get everything on the original including four ratios (plus the famous 'all buttons in' mode) and it also sounds as good. One of the best compressor emulations out there.

www.ikmultimedia.com

Waves **CLA-76 Compressor/Limiter**

Mac/PC $249

Rather than a standard 1176, Waves' emulations take two specific models owned by engineer Chris Lord-Alge which have a more aggressive character thanks to years of use and repair giving them a very distinct sound that is highly sought after. (Often on sale for just $30!)

www.waves.com

Universal Audio **Fairchild Collection**

Mac/PC £299

Like the EQ collection, it's hard not to recommend this bundle, which also now runs native without the need for UA hardware. You get three versions of the Fairchild compressor made famous at Abbey Road, and it's particularly good for achieving the Beatles' drum sound. They're more transparent but the 'later' units still yield that much sought-after sound.

www.uaudio.com

> Step by step

4. Improve your entire mix with legendary Fairchild compression

1 > The Fairchild 660 and 670 are among the most iconic pieces of studio hardware ever. One was used by The Beatles in the '60s, but they're equally magical on modern mixes. We're using the Universal Audio Fairchild Tube Limiter Collection, although there are some great emulations from Waves (PuigChild) and Overloud (Comp670) too.

2 > We'll start with the 660 (mono) unit and a bass sound. Here we're first trying to tame the notes to keep them level, so we'll start by taking the attack and release times up (set Time Constant at 5) and increase the makeup gain (Output) to hear it, and put the compression ratio at 10. This should really even out an uneven recording.

3 > Now we have an even-sounding bass, we can add some overdrive; again, still using the mono 660. First push the Input Gain up to maximum. We'll also take the attack and release times down from their current Time Constant Value of 5 as we want the signal to quickly recover from the compression.

4 > Reduce the Time Constant to 1, then, and the Threshold to about two thirds. Now use the Fairchild's unique HR (headroom) option to increase the effect. It's a tiny screw that you can 'turn' clockwise to increase the distortion. Now the bass should really cut through.

5 > For your drum track, we switch to the stereo 670. We control the level and hear the compressor in action by reducing the Threshold to around half and using the output gain to make up the difference. Engage the On switch to hear how the Fairchild thickens the sound.

6 > For a more aggressive drum sound, reduce both attack and release times by taking the Time Constant control down to 1 and up the Threshold to 7. You can also adjust the Headroom with the Screw option and Sidechain to increase the effect of the kick and snare.

> Step by step

4. Improve your entire mix with legendary Fairchild compression (continued)

7 > The Headroom screw can be turned even further to maximum, and this, combined with pushing the Ratio to a maximum, delivers the most extreme compression the Fairchild is capable of, great for effects and extreme drums.

8 > For vocals, we're back to the 660 unit. You can simply use the Fairchild – as with a lot of 'analogue' vintage plugins – just to add some presence to the sound. Simply increasing the Input adds a lovely warmth to the vocal, for example.

9 > We'll take the attack and release times down to a minimum (Time Constant 1) and experiment with the Ratio using the Output for make up gain where appropriate. You're after a silky, even sound that shines through the mix rather being than overly aggressive.

10 > There's no dedicated Fairchild compressor emulation in the *Computer Music* Plugin Suite, but we can get similar results for our mix parts with eaReckon's CM-COMP 87. For more even bass and drum sounds, set the ratio to 4:1, the Threshold to -18dB and fast Attack and Release times. This should tame both drum loops and basslines.

11 > For some of the more extreme compression that we covered with the Fairchild, you can up the Threshold and Ratio values, thus turning CM-COMP 87 into a more creative effect. This works particularly well on drums but any part will benefit.

12 > Finally for vocal evening, set the Threshold so that louder parts trigger the green LED and quiet parts don't. Apply a Threshold of around 6 to tame the louder vocal, and boost the Make Up gain (8dB) to make up for the compression. Your vocals should be more level.

> Step by step

5. The 'all-buttons-in' trick with the UREI 1176

1 > Now we'll demonstrate one of the most commonly used processes with classic gear, the 'all-buttons-in' trick which was originally done on the UREI 1176. Rather than pay the better part of ten grand for an original, we'll load up IK's Black 76 instead. It's slightly cheaper at €80, and there are many (many) more 1176 emulations out there.

2 > The effect is best heard on a guitar or drum loop, although you can apply it to any sound in a mix; or indeed an entire mix should you wish to go a bit wild. Here we've loaded in a drum loop and guitar loop to check them both out. Give yourself plenty of input and output gain but don't clip the signal.

3 > Try adjusting the Attack and Release dials and the Ratio button options (between four and 20) to hear the 76 in action. Just using it in Amplifier Mode (using the appropriately named preset), gives you an idea of what the 1176 can bring, without even dialling anything in.

4 > Now engage the All Buttons In mode, the unique 1176 feature where the resulting ratio is changed to between 12 and 20:1. The attack and release times change, along with the compression curve, to result in a much more overdriven sound. It's especially great for guitars and very up front.

5 > If it's not that noticeable, simply dial in one of the presets – Extreme or Indy work well on the IK version – and then switch the plugin on and off to hear it in full effect or bypassed. That is the 'all-buttons-in' sound in full flow!

6 > There are a few compressor options in the *Computer Music* Plugin Suite to give you a similar overdriven sound, but we think Ignite VST's Vice One gives the closest. Dial up the Input gain and Saturation while keeping the Attack and Release options low to hear it in action.

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6 of the best vintage reverbs

From emulations of physical plate reverbs to digital emulations of, er, digital reverbs, here are the best

Soundtoys **SuperPlate**

Mac/PC $149

One of the newest and best reverb plugins, SuperPlate is an incredible five plate reverbs in one. Plates are not exactly practical these days but still sound incredible and this is simply the best way to enjoy a lot of them. You get emulations of an EMT 140, EMT 240, Audicon, EcoPlate III, and Stocktronics RX4000 – that's a lot of vintage plate reverbs that would take up a lot of room (not to mention cash) condensed into one plugin.
www.soundtoys.com

Cherry Audio **Stardust 201**

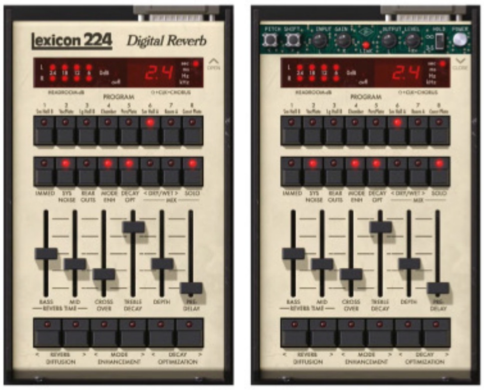
Mac/PC $29

Technically the original Roland Space Echo was more delay than reverb but with so many features packed into this emulation, it seems fair to include it here. Stardust 201 is a fantastically flexible emulation; it's cheap and sounds great. You get seven tape-head modes for a wide range of tape echo modes, a spring reverb, chorus and overdrive. One of the best reverb/delays out there.
www.cherryaudio.com

Eventide **SP2016**

Mac/PC $249

As one of the first studio effects boxes back in 1982, and even one that you could upgrade by plugging into, the original hardware reverb broke ground in many ways. It sounded great too. This emulation covers all the ground of the original – from room to plate reverbs – and sounds as good. Great for no-frills ambience and mighty lushness.
www.eventide.com



Universal Audio **Lexicon 224**

Mac/PC £349

A seriously good emulation of a very serious digital reverb, as used by everyone from Talking Heads to U2 in the late '70s and '80s. Lexicon were the big name in studio reverbs back in the day, with the 224 contributing much to that reputation. UA's take is typically accurate, with the same algorithms as used in the original. At £349, it's the most expensive here but thankfully you don't need UA hardware to run it.

www.uaudio.com

Audio Ease **Altiverb**

Mac/PC €499

Bit of a lazy inclusion, this, because while Altiverb is not a vintage reverb emulation, it is an emulation of everything! You get convolution reverbs of some of the most famous locations in the world – Sydney Opera house to Wembley Stadium – and recording studios like Hansa. Even studio reverb gear. See? It does everything.

www.audioease.com

Arturia **Three Reverbs...**

Mac/PC From €80

...You Will Actually Use. And you really will. OK, only two of these are emulations of *vintage* reverbs, but very fine ones they are too. You get a fantastic version of an EMT 140 plate, plus Rev SPRING-636, an emulation of the Grampian 636 spring reverb. Add in a new algorithmic reverb called Intensity and this is truly a reverb delight.

www.arturia.com

6 of the best classic tape simulations

Need some saturation, glue or plain old analogue hiss in your recordings? These plugins could be the reel deal

Softube **Tape**

Mac/PC €99

Tape has a simple interface and controls you can master in seconds. It features three modelled and unspecified tape machines (likely Ampex, Studer and EMI) each giving different frequency boosts. It's great for warming a mix and gluing tracks together. And lovely on instruments and vocals.

www.softube.com

u-he **Satin**

Mac/PC €129

Unbelievably, Satin is a decade old. However it still delivers a beautiful tape emulation sound, as well as throwing in a couple of awesome effects with its Delay and Flange modes. You can also shape the sound by selecting EQ curves from various classic tape record and playback circuits, and adjust the Headroom knob to fine-tune distortion. Still 'reely' brilliant and a classic in its own right.

www.u-he.com

Waves **J37**

Mac/PC $299

The Studer J37 first found fame at Abbey Road in the '60s when the studio bought four of them, each a mighty four tracks of recording power. Two machines were 'sync'd for the Fab Four's recordings. Waves' J37 does a fine job of emulating the warmth and joined up nature of the original. With wow, flutter, hiss, delays and three tape models.

www.waves.com

Universal Audio **Studer A800**

Mac/PC £229

Introduced in 1978, the Studer A800 quickly found fame and homes in huge studios including Ocean Way and Paisley Park. As usual, UA has modelled everything in the original, so you get the warmth and character that found its way onto recordings by everyone from Metallica to Stevie Wonder. You can use it for complete mix saturation or it excels delivering presence to your mid-range.

www.uaudio.com

Baby Audio **Taip**

Mac/PC $69

Baby Audio used machine learning to analyse multiple tape machines while developing Taip. Typically with BA, you don't get standard tape controls but Glue (compression), Wear (wow and flutter) and Noise. These, combined with an EQ and Presence control, make Taip a great-sounding and flexible plugin that offers everything from subtle enhancement to full-on sonic destruction.

www.babyaud.io

AudioThing **Reels**

Mac/PC €59

Reels is no average tape sim with analogue warmth for a digital world; instead it's about grungy distortion, emulating as it does an old Japanese reel-to-reel recorder "found in a distressed state at a local flea market". You get nasty echoes, machine noise and crunchy lo-fi distortion. Not one for tape purists, but it's lovely all the same.

www.audiothing.net

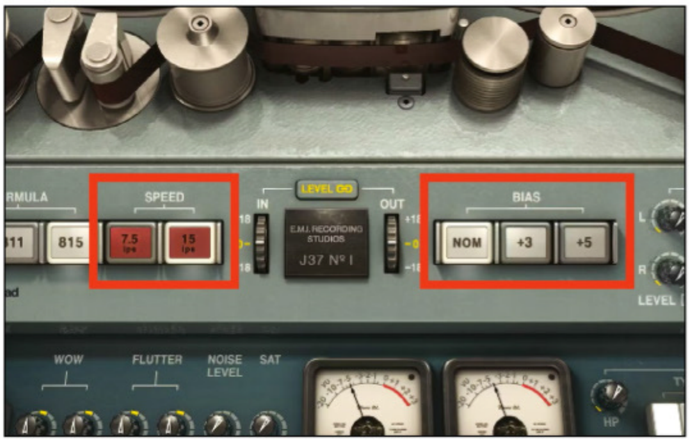
> Step by step

6. Get a vintage tape sound with the Studer J37

1 > The Studer J37 is an iconic piece of recording history, having taken its place at Abbey Road and recorded many a legendary track. Its sound is recreated perfectly in Waves' J37 plugin. Let's have a look and see why it's such a fabulous tool and what it can do to your sound. First, the Noise control introduces tape hiss, like white noise, and the Saturation knob introduces analogue-style distortion.

2 > The type of tape (or formula) a recorder used was very important back in the day. The J37 plugin emulates three different tape types produced by EMI in the early '60s (the 888), the mid '60s (811) and '70s (815), improving in sound quality as the years passed. This means you choose the 888 tape formula for a more vintage lo-fi sound; the 815 if you want sonic cleanliness.

3 > Wow and flutter were caused by the tape moving at irregular speeds, usually caused by imperfections in the tape recorder mechanism. These controls emulate the resulting pitch effects and can be anything from gentle chorus/tremolo (wow) or vibrato (flutter) right up to dramatic alien-like pitch effects. So tread with care!



4 > Speed and bias both impact the frequency response. The slower 7.5 inch per second speed gives a warmer low and high end; the faster 15ips is less coloured and flatter. Bias is a measure of the accuracy of the recording and, moving from left to right, increases the effect of the saturation created by the selected tape formula.

5 > Many tape emulation plugins come with a built-in tape delay which emulates the sound of two machines working together to introduce the delay. The J37 plugin has a very flexible delay built-in that goes way beyond simple tape delays, but still sounds authentic.

6 > Want some free tape emulations? As well as the Mac and PC options opposite, try Chow DSP's Chow Tape Model. It has many of the features we've discussed including speed, bias, tape type, wow and flutter. There's no delay, but what do you expect for zero cash?

6 of the best free 'vintage' plugins

Ignite Amps **PTEq-X**

Mac/PC

We've shown you two proper developers emulating the Pultec EQP-1A… for a cost. But you can also get it for free with this 3-in-1 plugin from Ignite Amps. You get the three EQ modules – the original, MQ5 and HL3C – plus four different tube types. For something that doesn't cost a bean, this really is one of the steals of the vintage plugin market (only you needn't steal it).

www.igniteamps.com

Cana San Martin **Mystique**

PC only

All the fun of a real reel-to-reel but in plugin form. Here you get tape saturation aplenty, a bias control plus bass and treble options, which all add up to a plugin that helps get your digital sounding setup back on a right and proper path to a vintage past. This is an easy to use TARDIS – albeit a PC-only one – to a happier analogue time.

www.plugins4free.com

ADHD Audio Tools **Leveling Tool**

Mac/PC

The Universal Audio version of the Teletronix LA-2A optical compressor is widely regarded as the best, even a classic plugin, but here's a free version, the ADHD Audio Tools Leveling Tool. It will tame peaks, is great for vocals and even features extra controls over the original, like a Sidechain option and a Drive knob.

www.audiotools.se

Klanghelm **MJUC Jr.**

Mac/PC

The Fairchild compressor is such a legend that it gets two entries here, with this very different take from Klanghelm. You can go for gentle compression without too much added character or more full-on processing. There are simple controls to operate it – like some kind of vintage submarine – but the results are very effective.

www.klanghelm.com

Analog Obsession **VariMoon**

PC

We've obsessed about Analog Obsession before now, as they really do produce some amazing freeware (Channev is a great channel strip and they also do some great bundles). The VariMoon is more like a Fairchild than anything else, even though it doesn't particularly resemble one, aside from its sonic character.

www.analogobsession.com

Engelen Audio **Kaput**

Mac

We've had a PC-only tape simulator so it's only right that we finish with a Mac-only tape sim, this time of the cassette variety. We used to curse our cassettes for the noise they made. Who knew it'd be in fashion one day. Here you can get all of that, plus distortion and the sounds of a cassette player on the verge of falling apart.

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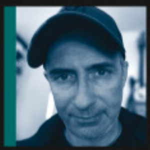
Synth Masterclass
with *Dave Gale*

42 Commercial bass sounds

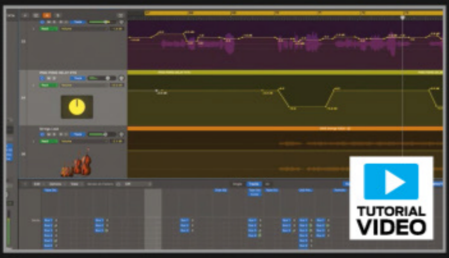
Dave Gale teaches you how to recreate the punchy bass sound heard in many a commercial smash



Mix Masterclass
with *Jon Musgrave*

46 Add level rides to a mix

Jon Musgrave continues his masterly mix series by exploring when and where to use level riding in your mix



Download the accompanying video and the MIDI/audio files at **bit.ly/cm324downloads**

Punchy commercial-sounding bass

Recreating the impactful bass sound of commercial hits like Jax Jones' *Whistle* needn't be difficult. Let's learn how...

Dave Gale

Dave Gale is an Emmy award-winning media composer, producer and orchestrator, with an enormous passion for synthesisers, in all their forms. His varied composing style embraces everything from full orchestral and hybrid scoring, to fully electronic scores, employing synths wherever possible. He also happens to own some of the finest synths in existence but we're not jealous, OK?

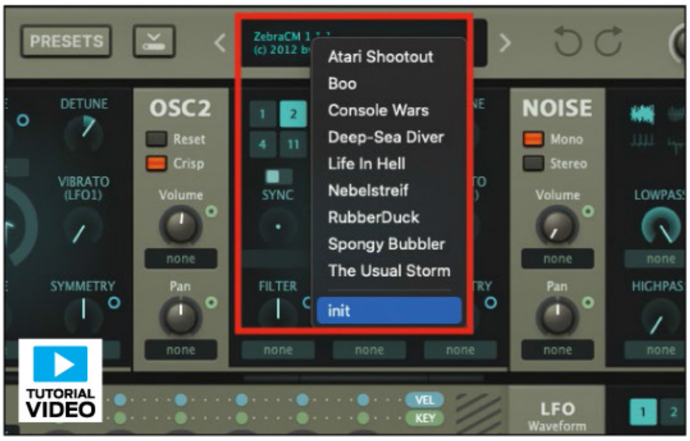
> Ever since the early days of jazz and rock'n'roll, the musical connection between drums and bass has been core. Tastes, styles and interpretations come and go, but finding the perfect bass sound, that fits against the drums in your mix, is often viewed as something of a holy grail.

Pacifying the multitude of platforms, where your mix has to translate on everything, from earbuds to a full PA system, is no mean feat. Too much bottom end, and it might sound great on lightweight headphones, but the moment you step into the domain of any reasonable hi-fi system, you could have a problem, as those low frequencies swamp your mix.

How then, can you give your mix a fighting chance? Apart from the established practice of scooping out an area of your mix's low frequency domain, where your bass will reside, there are other things that you can do, at the level of creating your synth bass sound. That's our tack here, as we create a degree of attack-based bite upfront, using the filter, with a little help from some envelope modulation. We can also start with a waveform which can cut through the mix, coupled with a sustained low end. Granted, we're likely to need some compression to help us achieve our goal, but that's all part of the mix-mill, on the way to achieving that commercial bass sound.

> Step by step

1. Make a punchy commercial bass patch



1 > Let's begin by initialising a patch within ZebraCM. Open up your DAW and load up the plugin. Once the plugin window is open, move to the central display at the top of the window, click to reveal the drop-down menu, and select 'init' from the bottom. This will initialise the patch.

2 > This patch is going to be a relatively loud one, so now would be a great time to reduce your master volume to a level of 50. Just as a reminder, every time you tweak a pot or setting on the plugin, you will see an accurate value/numeric in the upper display.

3 > We will begin our sound creation by moving to the OSC1 section; click and hold on the waveform, while dragging the mouse upwards. We'll use a relatively harsh waveform, which requires a value of 4.40. There shouldn't be any need to adjust the volume, which should be set to 100, by default.

4 > Keeping within the OSC1 section, activate the waveform aliasing to the power of 4. It should become highlighted in turquoise, once selected. This creates four waveforms which will be compiled, one on top of another. It will sound slightly phased, until we detune these waveforms, so adjust the Detune pot to a value of +12.

5 > We are now going to turn our attention to OSC2; this will deliver more of the bass element that we require, through the selection of a Square wave. Click and hold on the waveform, dragging upwards until you see a value of 2.00. You will also need to increase the volume to a value of 104, as it is completely reduced to 0, by default.

6 > Much like OSC1, we can fatten up the sound further by inducing some aliasing, so select the number 2 within the Aliasing section. We will also need to detune the waves, to eliminate any phasing, setting the Detune pot to a value of +6.

Download the accompanying video and the MIDI/audio files at **bit.ly/cm324downloads**

> Step by step

1. Make a punchy commercial bass patch *(continued)*

7 > As with all of the patches that we make using the ZebraCM, the choice of filter really does heavily affect the sound. Ideally, we want a filter that can induce overdrive, so we've plumped for the LP Vintage filter, from the Zebra's drop-down menu. You can, of course, opt for other filter types, if you'd prefer a cleaner sound.

8 > Let's make a couple of adjustments to the filter, beginning with the Cutoff pot, which we want to set to a value of 59. We will also be introducing some cutoff modulation, which we can employ by adjusting the default-assigned ENV2 pot. Set this to a value of 62.

9 > The final part of the filter-shaped puzzle will be to add the overdrive which we mentioned in a previous step. Activating this is as simple as increasing the drive pot to a value of 61. This will add impurity and distortion into the sound, while emphasising some of the low-end frequencies.

10 > Time to switch up the envelopes; beginning with ENV1, which controls the amplitude of our sound, we can leave the Attack pot set to its default value of 0, Decay at a value of 50 and the Sustain at 80. The Release pot will however need to be reset, to a value of 20.

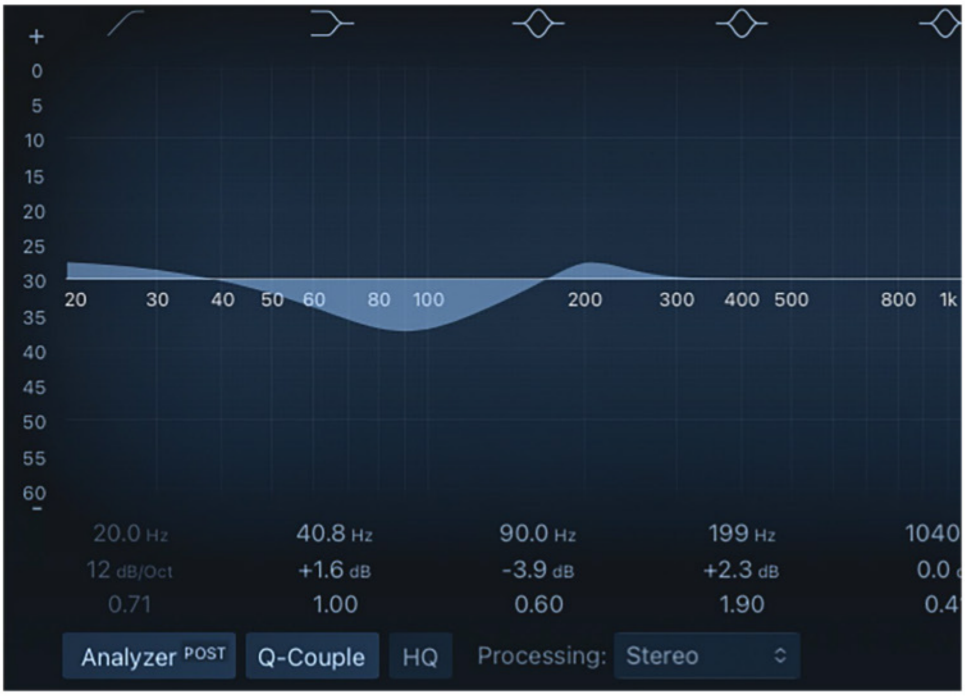
11 > ENV2 is going to be modulating the Cutoff, within the filter section. Leave the Attack pot set to its default value of 0, but then set the Decay pot to a value of 29, set Sustain to a value of 0, and finally set the Release pot to a value of 15. The harsh attack and decay will sharpen the brightness at the front of each note.

12 > Our patch is complete, but will benefit hugely from the application of compression. In keeping with the vintage filter, some form of vintage-modelled compressor should sound fantastic. Think 1176/FET-style or LA2, although we also really like the SSL X-ValveComp, which adds compression and impurity, in equal measure.

PRO TIP

PACKING A PUNCH

As any mix engineer will tell you, getting the bottom end of a mix to sound just right is no easy feat! There are, however, some time-honoured techniques which you could definitely use, to get the best out of your new bass sound. In just about all forms of commercial music, the association within the mix, between the kick drum and your bass instrumentation, is vital to mix success. Depending on your kick drum sound, one technique, heard everywhere, is to scoop out a small frequency plot, in the lower echelons of your bass drum sound. This scalloped void can then be filled up by your bass sound. You may even want to increase these equal and opposite frequencies within your bass EQ. The net result of these actions is that you're neither accentuating or depreciating the lower frequency band of your track, keeping things relatively flat, which will hopefully act as a great foundation to your mix. Get this right, in your commercial mix, and the plan is that all the other elements will fall into place, building on the earth-shaking, low-end foundation.



RECOMMENDED LISTENING

JAX JONES & CALUM SCOTT
WHISTLE
The exposed bass sound in the chorus, alongside the kick, provides the perfect commercial backing to the whistle-based hook from this track.
bit.ly/jj_whistle

CALVIN HARRIS
HOW DEEP IS YOUR LOVE
This seminal classic is a good example of how to use plenty of bass-sound punch, therefore leaving space for the vocal to rise above the low-end punch.
bit.ly/ch_howdeep

Calvin Harris in deep contemplation of the finer points of bass punch

Andy Willsher/Redferns/Getty

Download the accompanying video and the MIDI/audio files at **bit.ly/cm324downloads**

Jon Musgrave

Jon is a London-based platinum award winning mixer, producer, composer and club remixer with a diverse CV that spans dance, pop, rock and music for media. He's also a long term contributor to *Computer Music*. Jon usually handles final mixdowns, which is why we've got him to share some of his pearls of mixing wisdom here

Add level rides to a mix

Level riding can be a vital way to control a mix. Here's when and why your faders should react with super-fast dexterity

> We use compression to iron out undesirable level differences but usually this is coupled with level rides both to add drama and to finesse our mix levels.

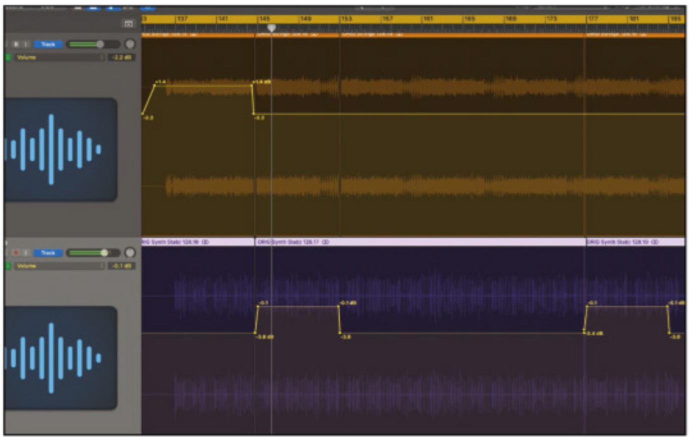
Once upon a time, level rides would have been performed live as the mix was printed. Then desk automation and DAW automation made these moves that bit more repeatable, recallable and much easier to execute. Indeed, the ability to draw and edit fader levels to quickly achieve incredibly accurate moves is without a doubt one of the biggest successes of DAW-based mixing.

Nevertheless, knowing when to use that flexibility is a skill, and if you start adding complex automated level changes to multiple tracks at the early stages of your mix, you'll more often than not end up in a mess. A good rule of thumb is to start by getting the mix sounding as good as possible with no level rides, but, at the same time, think ahead to where and when level rides will be needed. As could be said for the progression of a mix in general, when it comes to adding rides, initial changes are quite broad but become more focused and precise as the mix progresses.

Of course, not every track will need rides, and techniques range from very precise word specific changes on a vocal, to broader section by section moves on instrumentation, and finessing fades on effect tails. In this tutorial we'll look at various scenarios. Let's get to it.

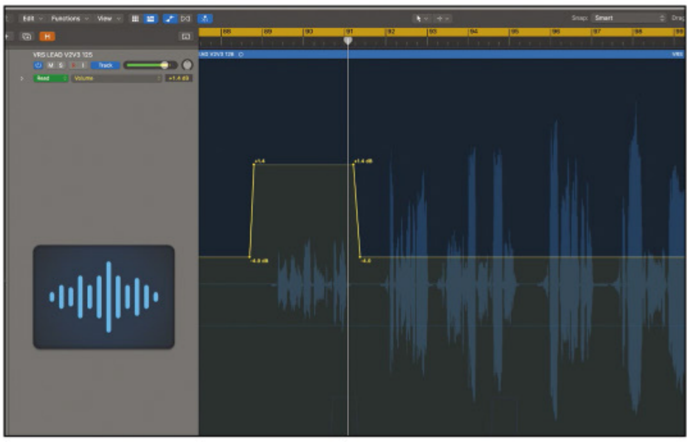
> Step by step

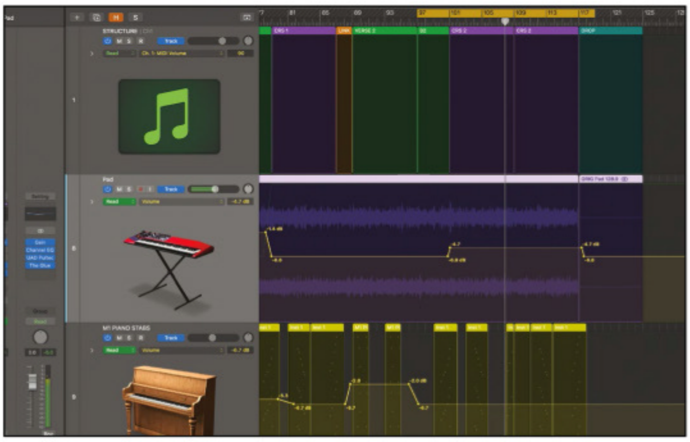
1. How to approach level riding in a mix



1 > Compression can go a long way towards levelling out our audio and making multiple tracks easier to balance. Let's start by assuming that you've already done this and have a good balance in place, but that some elements won't sit throughout, or sometimes get lost. This is a good point to start adding level rides.

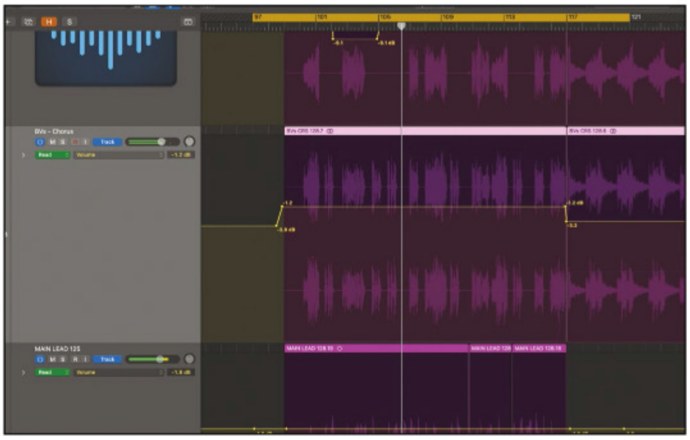
2 > Initial moves are often quite basic and could simply be modifying levels for specific sections of track. A good example would be boosting specific instrumentation in a chorus section and bringing it back down in verse sections. Or we could use some basic level rides to even out inconsistent section levels of a lead vocal.

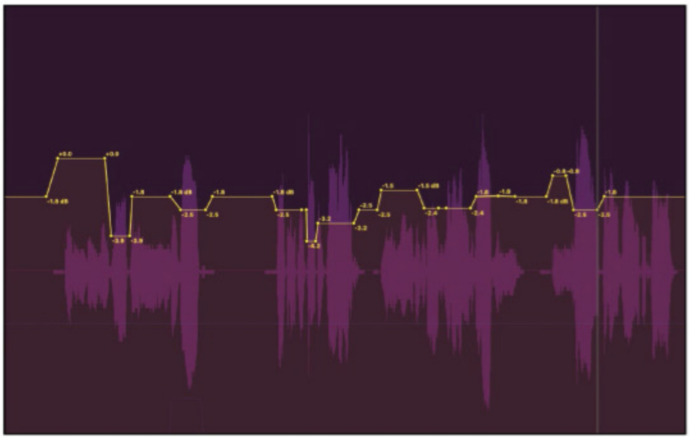




3 > Here we have a vocal part where one section has been recorded at a lower level than the rest. We could tackle this right at the start of our mix (see the clip gain section of the pro tip). But if we've reached this stage of the mix and still need to resolve an unusually quiet or loud section, simply apply a sectional level adjustment.

4 > In a second example, we have a synth part that plays in most of the mix. It has quite a lot of high frequency content which should help lift the chorus. However, with other sounds coming in at the chorus, the effect isn't as dramatic. Here, a modest push of just a couple of dB restores the effect.



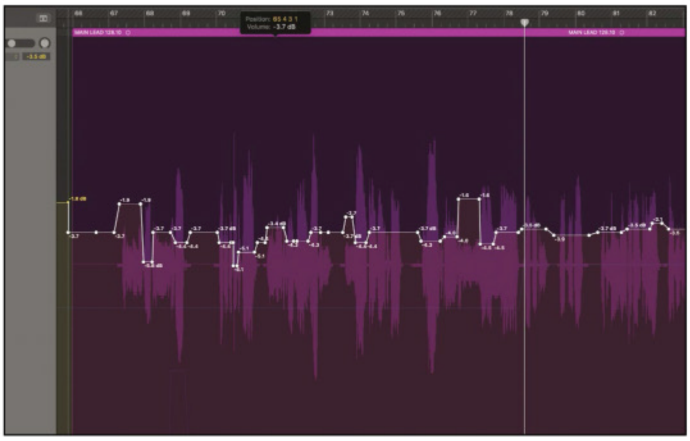


5 > If you work on tracks with full vocals, it's likely you'll spend quite a bit of time riding the vocal levels. It's not unusual to need to ride blocks of backing vocals either to add weight in a chorus or to pick out a specific phrase or word.

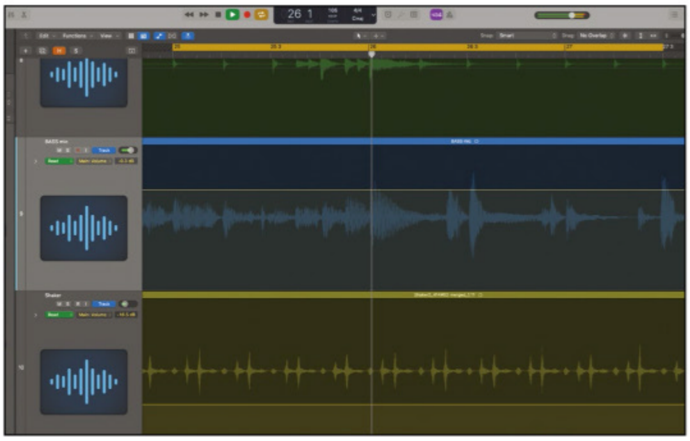
6 > With lead vocals, intelligibility is often important and this means we may have to ride individual words or syllables even to achieve the desired outcome. This level of automation may look busy or unnecessary, but for vocals in particular it can be better than using extreme compression.

> Step by step

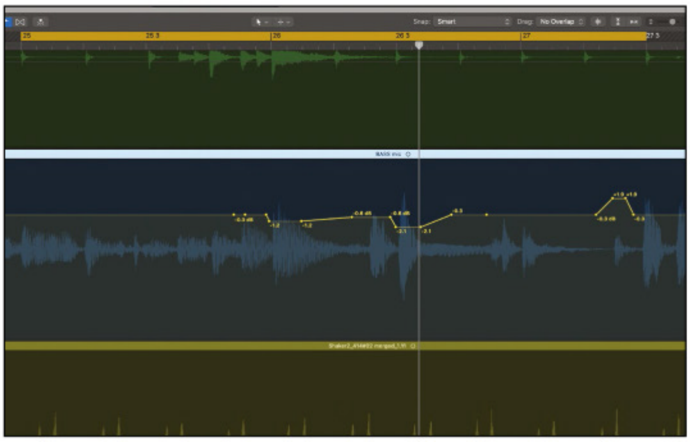
1. How to approach level riding in a mix *(continued)*



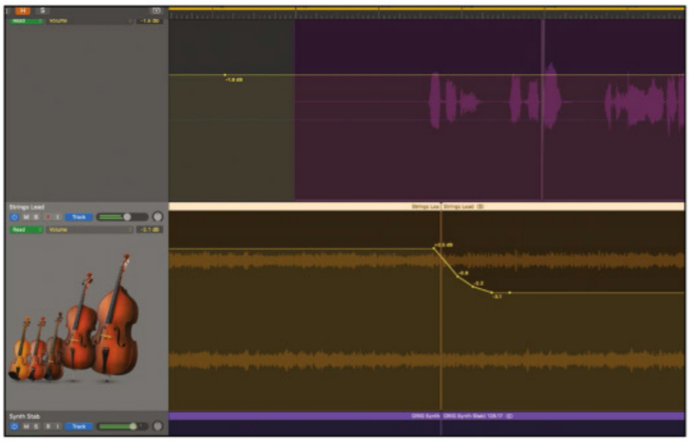
7 > Finally, if you go through the process of adding intricate rides to help your vocal sit, but then decide that the overall vocal is either too loud or too quiet on this particular section, then rather than tweaking individual moves, your DAW should allow you to lasso the section and apply an overall offset.



8 > Bass sounds are often quite inconsistent in level from note to note and we can usually achieve some improvement using a combination of compression and precise EQ. That said, and this seems particularly true with bass guitars, using automated level rides is often the best finessing option.

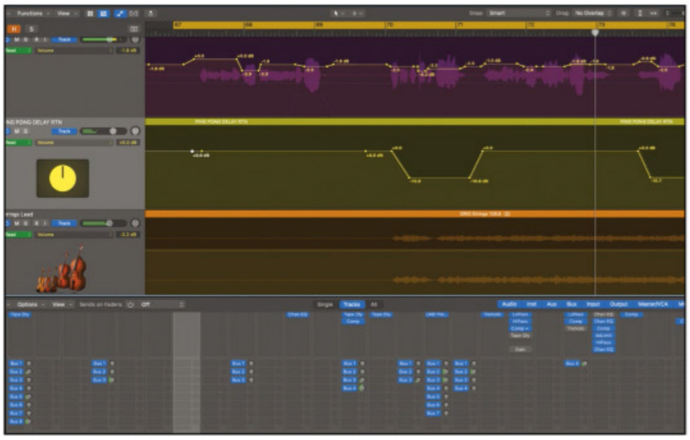


9 > Here we have a bass part and a few of the notes are problematic at a specific point. A couple pop out way too much and one is too quiet. Rather than compromise the sound with excess compression, we've used a few targeted level rides to achieve what we want.



10 > Instrumental lead parts can be hard to slot into a balance, particularly if they overlap with other significant aspects such as vocals. This is a perfect excuse for some careful level riding. In our example, we have a lead synth riff that needs to make way for the vocal, but not suddenly disappear as that would sound odd.

11 > On a similar tip, sometimes we have a special effect that needs an extra boost to make itself known. We find this is not unusual in a club track, where you may have an array of spot effects that blend nicely with the track, but at a specific point, one effect needs to be featured. This is our example here.



12 > Finally, fades. Pretty obviously, level rides are the best way to fade sounds in and out in your track and you'll often find handy curve shapes to finesse these. But we can also use fades to tailor delays and reverbs. Here we've tailored our delay auxiliary return level so that we hear the required delays clearly.

PRO TIPS

Ride of the machines

There are a few plugins that tackle level rides in a more automated way. Example plugins include Waves Vocal Rider and Bass Rider, TB Pro Audio Gain Rider 3, Melda Production mAutoVolume, and WA Production Outlaw, and you'll find a CM version of Outlaw in the *Computer Music* Suite. These processors work towards a user-selectable target level, but can also work to a sidechain, such as a bussed track mix. They may also output automation data to record into your DAW.

Don't touch that dial...

Most DAWs feature additional control over individual clips, often including clip-specific gain. On the face of it, this offers another way to tweak your mix levels, but changes made to the clip may affect levels prior to any inserts and thus influence any level-dependent plugins like compressors. In this regard, clip gain typically isn't suitable for rides. However, something that works well when you have source audio that is poorly levelled in the first place, is to use clip gain right at the start of the mix to make broad brush adjustments.

Gain Rider 3 and MeldaProduction mAuto Volume make adding level rides easy

Some of Sister Sledge's vocals would likely be level-ridden in 2023

Patrick Ford/Redferns

RECOMMENDED LISTENING

LOREEN
TATTOO
Any track where the vocal shifts from whisper to full voice invites multiple vocal level rides and this busy production is a perfect example.
bit.ly/lor_tatt

bit.ly/muse_explrrs

SISTER SLEDGE
THINKING OF YOU
This disco classic has a couple of pretty loose vocal levels that would no doubt get tweaked if found in a more modern DAW mix.
bit.ly/sissledge_think

DJANGO DJANGO

Reborn with a new retro house-inspired sound, Django Django's new double-album *Off Planet* is a flurry of hypersonic colours and energy. We spoke to the band's cofounder David Maclean about the record's influences, tech and evolution...

> Few artists have the deft ability to genre-hop without alienating vast swathes of their audience, but for Django Django, and the four-part *Off Planet* expanding their sound palette to channel the vibe of their formative dance music influences, as well as introduce an array of guest lead vocalists, has yielded a galaxy-sized bounty. Take the Self Esteem-fronted *Complete Me,* a pulsing slice of early '90s rave-pop, led by one of the UK's most in-demand vocalists. Then there's the Jack Peñate-centred *No Time*, a joyous slice of euphoria, pre-soundtracking the baking summer we're set to have this year. Cuts that sound a world away from Django Django's earlier work, yet share an exploratory through-line with them.

Founded in 2009, the stuttering indie-rock oddity *Default* launched the four-piece as an unconventional addition to the UK's indie canon. Subsequent records found the troupe investing in more '80s synth-pop influences (*Marble Skies*) and sci-fi tinged psych-rock (*Glowing in the Dark*). Now Django's core

More machine than man: Django's synth-station overlord Tommy Grace

Polly Thomas / Getty Images

creative instigator – former house DJ and beat-crafter David Maclean – felt it was time to gear-shift into a dimension not a million light-years from the dance music culture that he spent much of his youth living.

We asked David how the record found its shape: "The starting point for this album actually goes back a long way. A lot of this music and the beats and stuff were kind of on old hard drives. I've been making music since the 1990s and there's bits and bobs from that era that were still floating around. During lockdown, I was forced to go back to old ideas. The timeline is a bit all over the place, but I guess it was lockdown that forced me to spend a long time thinking about it, that was the starting point."

Forming the band with a group of co-students at the Edinburgh College of Art – Vincent Neff, Jimmy Dixon and Tommy Grace – Maclean has been at the forefront of the band's questing sonics. With *Off Planet,* David explains that the journey to this point has been a roadmap-free ride: "We'd made the first self-titled album which was, like, a bit of a fluke, we made it not really knowing what the hell we were doing. We just made it. Then the second, third and fourth albums represented us striving to make albums that had all the right flow and the right textures and stuff. We really put a lot of time into how they sounded as albums. That dictated a lot of the tracks that went on there."

> "I want to make tracks without worrying if they 'sound' like Django Django"

Despite this refined focus, David wanted the band be an even freer creative vehicle, "I want to make the tracks I want to make without worrying where they fit on albums, or if they 'sound' like Django Django. A lot of the stuff that I make on my own is far more electronic based and really not so focused on songwriting. [Making this album] we spent less time worrying about what people want from us and sort of doing what we wanted to do a bit more."

In-demand vocalist Rebecca Lucy Taylor (aka Self Esteem) lent her pipes to *Off Planet*...

Kieran Frost/Redferns

...as did indie singer-songwriter Jack Peñate

Andy Sheppard/Redferns

Call on me

Off Planet welcomes a host of guest lead vocalists to the Django Django universe, in a move inspired by the acts that David loved when he was younger: "I've always really loved the whole 'features' thing, it was a big part of hip-hop and artists like Massive Attack. It's just a way of switching up things. But if Jim and Vinny and I can't crack the nut of the topline, we kind of think it's ok to sort of get other people in to help. That was the idea behind that. A lot of them were tracks we had sitting around that nobody knew how to approach. Then we got someone in and straight away they knew how to topline it. That was a big help."

Among the guest vocalists, was Rebecca Lucy Taylor (aka Self Esteem) who has worked with the band before. "I produced Rebecca's first EP and released it on a little label I was running at the time. We'd met at SXSW and then in London years ago. I remember talking about doing a more dancehall, R&B thing then when she was still in (her first band) Slow Club. We finally got round to doing stuff, and we kept in touch. I'd made that beat, not really knowing why or what it was for. Suddenly I could just imagine her on the track (*Complete Me*) I sent it to her and very quickly she just sent back the topline. She just got the whole vibe."

The guest appearance of Jack Peñate on the blinding *No Time* features an incredibly succulent lead vocal, routed through a Soundtoys-leaning chain. "It was put through Soundtoys EchoBoy and Decapitator and just a whole heap of stuff in that chain. Again, I just went to one I'd previously saved. He wanted quite a raw sound, I'd had this one which was a bit OTT. I was a bit worried it was too much but he wanted it, he liked it. I think it was right. The track is quite influenced by Roy Davis Jr."

The computer music revelation

Though Django Django is a democratic outfit, Dave had no qualms about incorporating more retro-angled sonics into his demos, without being too prescriptive about the direction he wanted to take the new record. "I never chase the sound. I get in the studio and get some loops going, then some samples and then it just comes out the way it comes out. I never really sit down and think 'I'm going to make something like this'. A lot of them sound a bit '90s, but then again I started making music in the '90s so it's not as if I was not around then or I'm being nostalgic – I was working with samplers and making music then so part of my brain is still stuck there, I guess."

We wonder if David uses some of that very same classic gear when building ideas today, and how balanced the current studio balance of hardware and software is. "The first thing I had was an E-MU sampler that I got at Turnkey in London. I just used to hook that up to a MIDI keyboard and a four-track; my friend had an eight-track actually and he'd bring that round. We'd share it. That was my whole way of making music for years, before the era of the computer screen. I remember Tommy and I had a flat in 2001 and he hooked up the first version of Cubase on an Atari. I saw that and remember saying 'this could change things quite a bit', seeing the waveform and things like that. I'd had an Amiga with some similar stuff, but I couldn't get my head round it."

> "I saw the first version of Cubase on the Atari and remember saying 'this could change things quite a bit'"

Following this computer music revelation, Maclean got himself a PC. "I first got Cubase 3 or something, and then for years, right up until around four years ago, I was only on Cubase 5. Even today I'm only using v8. I'm always way behind on software. But, it works for me. The way I use it is still in four-track mode. I treat everything very rudimental, and more as a tool."

Nevertheless, David's plugin arsenal is fairly vast. "I love Waves and Soundtoys stuff. For the first album I was using FL Studio quite a bit, in conjunction with Cubase. For me, if it sounds good, it sounds good. On the first album we got asked a lot about the process, and people were surprised by how DIY the making of it was, creating most of the samples ourselves. Now everyone is doing that. Hitting things and recording it."

Photo: Victor Frankowski

Despite having a rack of retro synths, Maclean incorporated NI's Massive and Kontakt into proceedings. David's sampling ethos merges the two worlds, with vinyl-based sample-building routed straight into Cubase. "I have piles and piles of records with stickers on them, that say where on the record the best elements to sample are. I can just go to the record, find the right break (it might just be a kick or a snare, or a bongo loop or something) and that'll be the starting point for the day. That could become the backbone of an entirely new track. I'm sampling straight into Cubase, my decks are hooked up to my computer. Sometimes if I'm stuck I'll head somewhere like Splice, if I need a polyrhythm for it, I'll pull some things out that I don't even demo, just to try and get some happy accidents going."

David never lets a drum machine do the heavy lifting, instead concocting beats via his curated array of one-shots. "I never program a drum machine to do anything, I like to break it down and have sort of one-shot elements from it and construct my own rhythm from it. I guess we have a weird way of working compared to some."

Getting in the galaxy mood

While there's some extraordinary sonics in play across *Off Planet* there's also some rather kitsch-sounding elements that evoke the pre-computer age. Namely, the cheesy laser-gun synth sounds that can be found on the extraordinary *Galaxy Mood*. "That's a Korg Kronos," David explains. "I don't know what it is but it's almost like an acid line, like a 303. That was just me jamming – I wasn't even trying to make music. The beat in the background is a range of disco loops that I pulled out from my sample library, there's a little bird tweeting

Gear galore: Django Django's David Maclean presides over the kit when the band play live

Photo: Victor Frankowski

that is actually taken from the start of an old electro record."

He elaborates further on the track's construction: "I've got a thing on my DJ mixer that loops on the bleep, so I just layered up loops on that in real-time, I had that running live and then I plugged in the Kronos, typed in the BPM and programmed an arpeggio. I was flicking through sounds and bending the processor knob thing. I was literally mucking around, but I caught a 10-second loop of me doing that and that would become the track. It was an accident that I'd never be able to go back and re-do the same way. It's quite bombastic that sound, you can't do anything else. The acid bass line was so heavy, all it needed was that and a drum. It just stayed like that."

While the retro-synth tone is a major component, there's also a touch of supporting guitars, taking more of a backseat on this record than before. Maclean explains that upon reading an interview with Tame Impala, the band began using Native Instruments' Guitar Rig."It's really cool just being able to sift through tones and effects. On the first album we didn't really have stuff to work with as good as this, the software wasn't quite strong enough. But now it's great. We use a mixture of live amps mic'd up and Guitar Rig. With mic'ing guitars up, engineers would be horrified at how we do it. We'll look on YouTube and check out the best ways to do things, but there's always something wrong, like a big buzz in the background. I guess I get quite annoyed in music production when there's too many options and infinite possibilities."

Chop chop

We ask David at what point the band decided to release the resulting record in four parts; and

Django Django's Tottenham-based studio is a musical playground, and the nerve centre of the band's record-craft

why? "Again, it was just not wanting to be constrained by a traditional album. Inevitably when you make an album, people will say 'don't make it more than 45 minutes, don't make it longer than 13 tracks'. I always wanted to do a double album. But the label resisted. I suggested we break it into four chunks and the label was more on-board."

Though initially the ideas for the record were pretty avant garde, eventually they settled into a more accessible format. "Originally they had no real structure, just weird loops and things like that. People would have probably hated it," David tells us. "Inevitably they just got polished up and developed into more songs. The label realised there were a few radio singles in there. So it all worked itself out. We talked about all different things, releasing under a different name or putting them out and not telling anyone. It was just a kick against album cycles and being stuck making a record and touring it again."

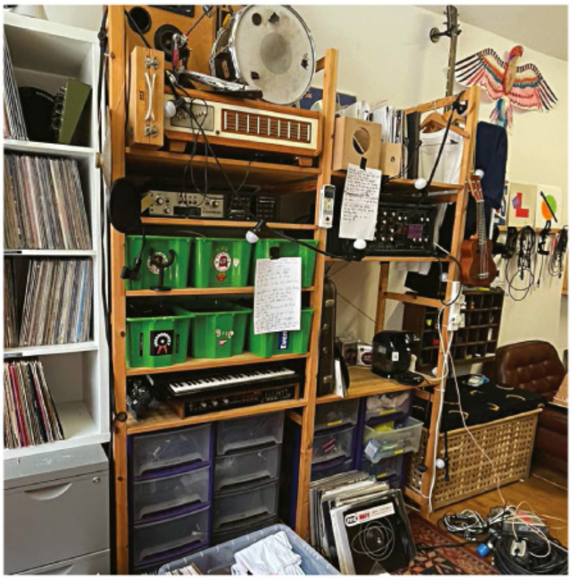
With that evolution in mind, Maclean explains that most of the 21 tracks on the record shifted quite dramatically from their initial more free-flowing forms; "*No Time* started out as an instrumental deep-house thing. It was just an organ and drums, then suddenly it became this sort of pop track with an uplifting chorus. As soon as (guest-vocalist) Refound started rapping on *Hands High* that went from being a sort of Serge Gainsbourg-type thing to a very different vibe. It's not really got a hip-hop backing track. For a lot of the tracks the starting point for was just so wayward. Case in point, the track *Black Cadillac* was much more of a dubby thing, almost like a sort of heavy dubstep thing. Then a kind of Link Wray-esque guitar line was introduced and that completely changed the whole song."

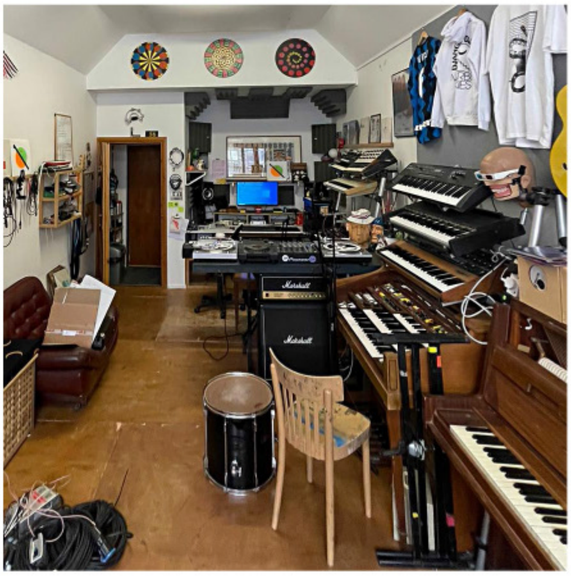
> "I have piles and piles of records with stickers that say where the best elements on the record to sample are"

No turning back

David explains to us that while he spends a lot of time in his garden-based office/studio, the main Django Django workspace in Tottenham is the band's primary Aladdin's cave of keyboards, pianos, synths, guitars and the group's main computer. "I was switching between the two. When the record got to a certain level of 'done' I'd be in the Tottenham studio most days." Dave admits that with this record, a gear-shift has happened in Django Django's mindset, meaning that the group will never return to the same sound that they'd previously explored on albums one to four. "We won't go back and make something that sounds like the first four albums again, or probably even this. The way we work, even track-to-track, is that if we make a sort of bombastic dance thing like *Galaxy Mood*, then the next track we mix is a kick against it. The next album will probably be very different from what I would say."

"That's the thing with Django, nothing is off the table," David says. "While we might sort of veer into genre stuff, we don't want to make a *genre* album that tries to emulate a genre's tropes, we're still able to turn our attention to anything really." Pushing Dave a little further reveals a few more details of Django's future





movements: "I don't want to give too much away, but we are talking about doing something quite different and more soundtrack-focused. Something with a bit of a narrative flow. So, yeah, I think we've liked this idea that we can kind of break out of a normal album now and try different things."

Escape velocity

As Dave and his bandmates gear up for a summer of live dates and festivals, our conversation turns to how he'd encourage readers of this magazine – and anyone trying to make headway in the modern music industry – to develop. "Well, it's so different from when we started, but I'd say just try and keep doing it." Dave implores, "Inevitably it leads to the question of money and whether you want to do it professionally. There's more possibilities now – loads of people make music and just have it live on Instagram and TikTok and don't actually make albums. Then there's DJs who just make tracks to play in their set and skip the rigmarole of press releases. Music is more instantaneous now. You can make something in the morning and by the night time you're playing it out in a club and everyone wants to know what it is. There's a million different ways to get your music out there now and the strongest advice I have is just to *do* it. [Don't] give up on it – just keep hammering away at it."

Dave's certainly very cautious of the impact that AI will have on the industry. "Everything is about to change again because of AI. I don't think anybody has really realised yet; it's not really hit them what's about to happen, these things like AI and streaming. But you have to keep up with the changes, you can't get grumpy and kick against it, you have to think about how to use it to your advantage."

While the band's sound may have shifted several gears since the early days, the emphasis on quick-fire creativity remains a solid foundation: "We have quite a speedy way of working, so if anything is taking too long or is too fiddly it's out. I could never get into patching up modular synths and Eurorack things because it's a huge time-sink. I'm not into spending ages trying to find a sound. I'm very immediate. If I can't get it quickly I forget it and move on."

For Django Django, *Off Planet* is both an explosion of summer-playlist-bound bangers, and a statement of boundless intent. **cm**

Off Planet is out now. Head to djangodjango.co.uk for more info on upcoming tour dates.

HEAR MORE

Complete Me (feat. Self Esteem)
bit.ly/cm_django_complete

No Time (feat. Jack Peñate)
bit.ly/cm_django_time

djangodjango.co.uk

soundcloud.com/djangodjango

facebook.com/thedjangos/

twitter.com/thedjangos

Hands-on with Logic Pro for iPad

Excited by Logic Pro for iPad? Deciding whether you should buy a new iPad just for the experience? Made the jump already? In this feature, we're taking a deeper look at this new tablet-oriented spin on Apple's beloved DAW, exploring its new features, what benefits it has over its desktop parent, and how to make the most of it

> We'd been speculating that Apple could release Logic Pro for iPad for rather a long time before the company's big reveal a few months ago. They had, after all, been quickly upping the specs of the iPad for a couple of generations, making great strides towards turning the device into a true tablet powerhouse.

The inclusion of the Apple Silicon chips in the latest iPad Pro range was the final signal that a full-fat version of Logic Pro could make the jump from desktop to iPad iOS, and sure enough, shortly after their arrival, Logic Pro was revealed running on the iPad in all its glory. But the best news is you don't actually require a full-blown iPad Pro with those Silicon chips to run it. Even iPads with the A12 Bionic chip (and running iPad iOS 16.4) are capable of running the app, which means devices going all the way back to the 8th generation iPad, 5th gen Mini and 3rd gen Air.

For many older iPad users, though – including us, it has to be said – running Logic Pro on iPad might mean an upgrade to the latest iPads currently on sale. Those are 9th and 10th generation iPads, the iPad Air and iPad Pros which have A13, A14, M1 and M2 processors respectively, and should run the software without any issues.

So the question is, is this long-awaited release enough to make you upgrade your iPad? And if you already have, how can you make the best of Logic Pro for iPad? Read on!

Logic Pro for iPad could very well be just what your music-making has been waiting for

It's Logic… and then some

The first thing to report is that Logic Pro for iPad is very much its own beast. While it will be familiar to both GarageBand and Logic Pro users, on whatever platform they are used to making music on, the new iPad version of Logic very much does its own thing, in its way. And really the app *has* to forge its own path. It's bringing in an all-touch ethos into Logic music making so will require a slight (and sometimes big) shift in thinking. So this isn't a port of the desktop version, more a practical vision of Logic Pro that makes use of the new touch environment in which it now sits. And that means it will require some getting used to.

That said, it is also very familiar. You'll recognise many of the 100 plugins that come with the software like ES2, Space Designer and Retro Synth. However, all-new plugins including Sample Alchemy and Beat Breaker deliver some magical audio and beat features, albeit in a very Logic(al) way. These alone really are worth trying the app out for.

And like the desktop version, you can download as much content as you like, although the maximum is rather less than the 72GB the Mac version requires. For the iPad, you are looking at a very reasonable 15GB, so we say go for the lot.

Once you are up and running, you can enjoy full automation and a great mixing experience. The mixer itself is very familiar, you get stacks of effects in blue and the main instrument per channel in green. Some features have obviously been redesigned to make the whole touch workflow that bit easier, so simplified instruments and effects are lined up per channel in Tile View – a chain of devices - You simply double-click on each to open the full interface with all the controls.

Other parts are direct lifts from Logic in terms of the design. The Ableton-style Live Loops feature, where you can launch audio and MIDI clips, always in time, looked pretty much like it was designed for an iPad when it came out, so that stays very close to the desktop version, as does the Step Sequencer. Many of the plugins look very similar to the originals, too, particularly the effect devices.

New arrivals include a tag browser for easy auditioning of sounds, but it's that touch workflow that is the biggest difference. You'll soon realise that you don't need the menu system that a mouse and pointer always leads you to, and that touching, twisting and pinching gets you where you need to be, in many cases probably quicker than you might be used to with the desktop version.

Something old, something new

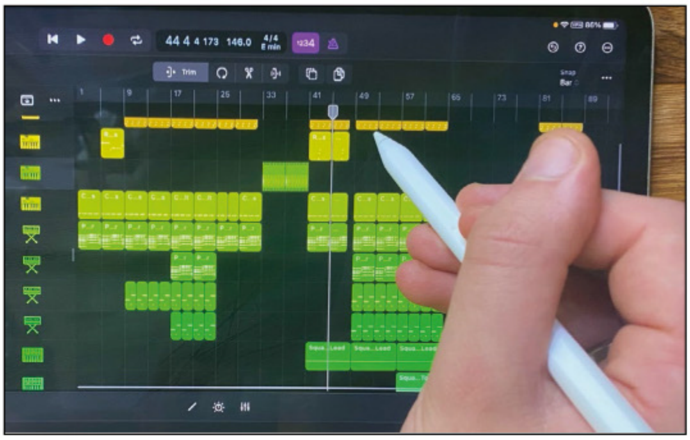
It's perhaps likely that some of those long-term Logic desktop users might be more confused by some of the new ways of doing things with this all-new Logic Pro – experienced and existing iPad users will probably find it all very intuitive and comfortable. So, if that long-term desktop Logic user is you, you've come to the right place. Over the next few pages we'll detail some of the new workflows – some of the different ways of getting where you are used to going with desktop Logic – and also some of the great new features you can enjoy with Logic Pro for iPad.

Indeed it's those new Logic features that make it worth trying out the new DAW. In fact we'd urge you to do just this, because you can enjoy the app totally for free for 90 days, so if you have an iPad with the power, give it a go, and use the following tutorials to immerse yourself in this new Logic touch environment, and then decide if it's worth a long-term purchase.

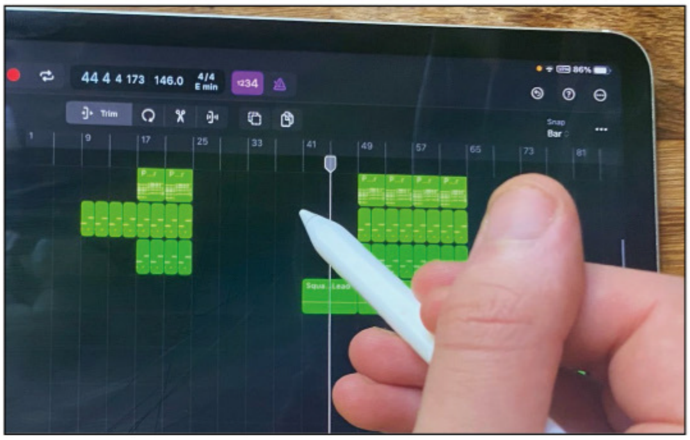
Logic Pro for the iPad could very well be what your music-making has been waiting for. All that power, all those plugins and all those professional features on an iPad so you can make music anywhere. At last, a *proper* DAW in the iOS environment – yes, please! So try it for free and see if you are as excited by this new touch DAW as we clearly are.

> Step by step

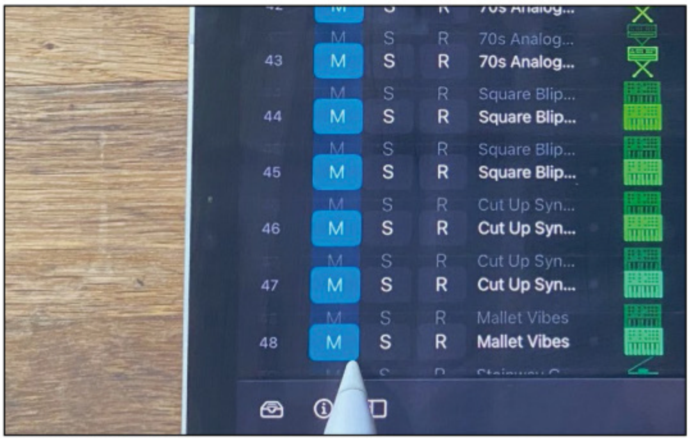
1. Multi-touch functionality



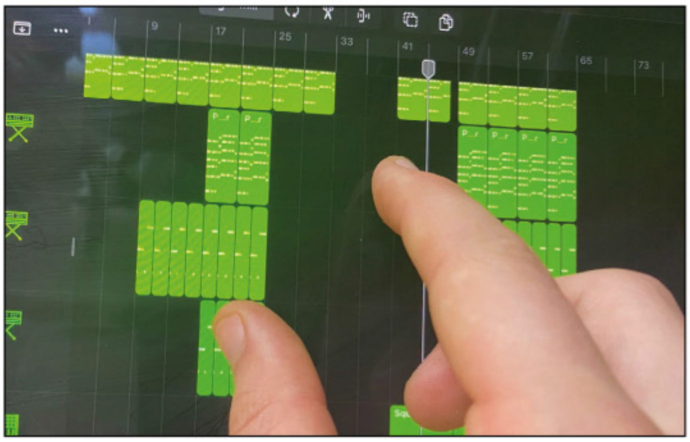
1 > The familiar approach of song tracks going from top to bottom and song arrangement from left to right still applies, but the big difference here is obviously touch operation. Using a stylus is good – not absolutely essential – but for some of the more precise moves in Logic Pro for iPad, it is recommended.



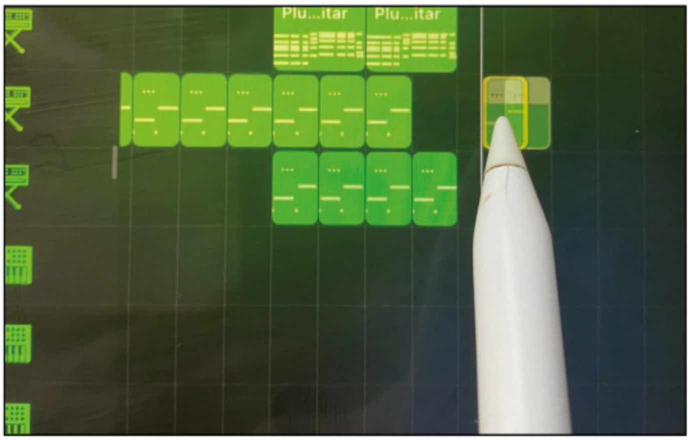
2 > Moving around your main project is as simple as touching the screen and swiping up, down, left or right – a single gesture will take your from one side of a project to the other. You can also highlight tracks and regions simply by touching/clicking them.



3 > The touch operation comes more into its own when muting and soloing. Click per track or click and drag/swipe to mute and solo several adjacent tracks simultaneously. Many tasks like this are now undoubtedly faster with touch.



4 > One such task which we think will revolutionise our particular workflow is the pinching of the UI for zooming in and out both vertically and horizontally. Yes, there are different ways of doing it on the desktop version, but pinching has been made to feel so natural by touch devices like the iPad that zooming is now second nature.



5 > In the main screen, it's just as intuitive to move parts around. Simply click and drag with either your finger or pen/stylus, just as you would that mouse and pointer. Click on the edge of the event and drag it to extend.

6 > The plugins Tile View is a cool new feature. It's an easier way of seeing devices on a channel and operating their most important parameters, with large enough controls to be able do this by touch. Devices on a channel are listed left to right, in an Ableton Live style.

> Step by step

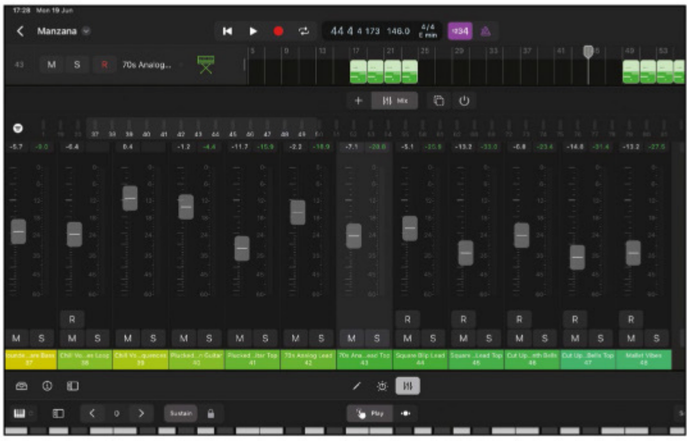
2. Navigation, devices and the mixer

1 > You get MIDI effects, instruments and audio effects, and the main controls are on show and very easy to see. Retro Synth has its Filter and Resonance controls, for example, often the most commonly used synth options.

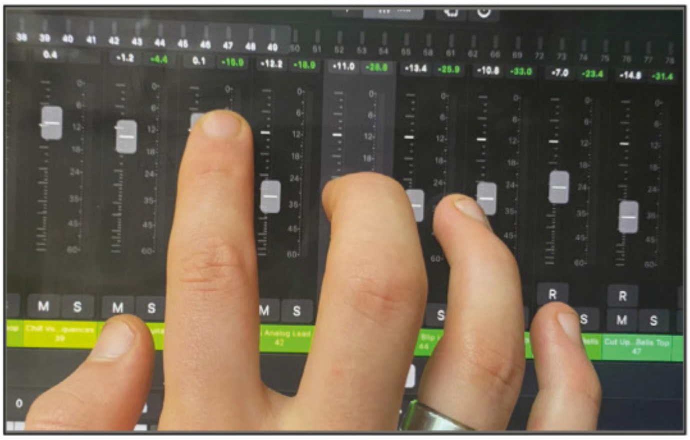
2 > Clicking on a device tile opens it up so you can quickly access more of its controls. You might have to make the window bigger to see them, but once again, it's a case of swiping up and down to navigate around the plugin's UI. Here's Retro Synth bigger.

3 > The Play Surfaces icon (bottom-right corner of the UI) opens a menu of performance/recording options – Keyboard, Drum Pads, Fretboard, Chord Strips and Guitar Strips – to play an instrument. Again, these are multitouch so you can play the keyboard with both hands, if they are small enough or your iPad is large enough!

4 > By now you'll have opened up plenty of instruments and effects but one of the neat – and necessary – workflow features of Logic Pro for iPad is that all the windows are resizable by clicking and dragging on the right-hand side so you can customise everything that is open. Here we've reduced the size of Retro Synth.



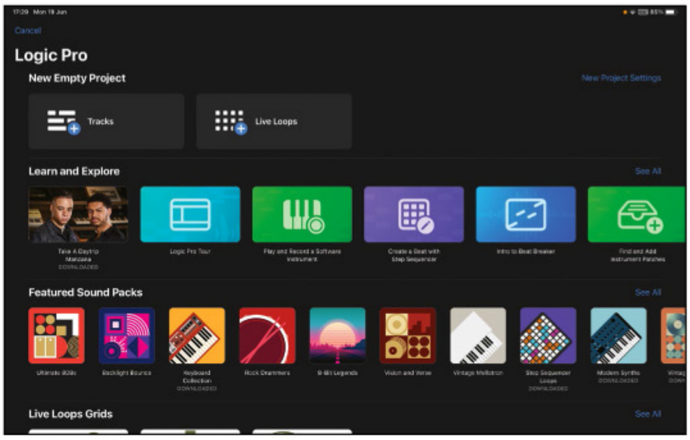
5 > One such window is one of the most important: the mixer. Access this with the bottom-right-hand icon. This can be impressively resized to cover most of the UI and again you can use a single swipe to go right or left across your entire range of inputs and outputs.



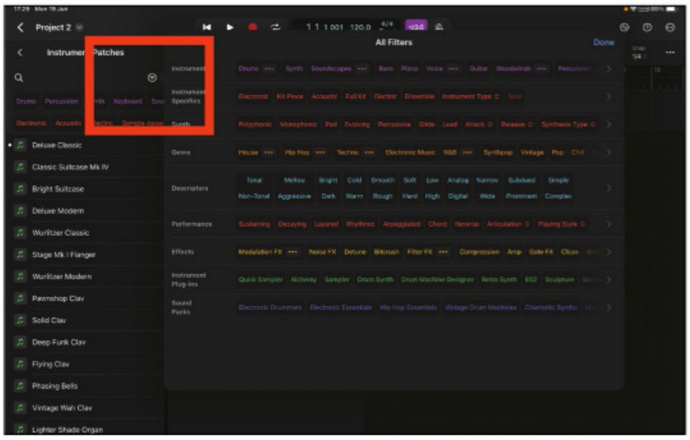
6 > You can also select different sections of the mixer – blocks of 12 tracks at a time, say – by clicking the top panel. And, of course, as it's multitouch, you can adjust multiple channel volumes with multiple fingers simultaneously. Try doing that with a mouse…

> Step by step

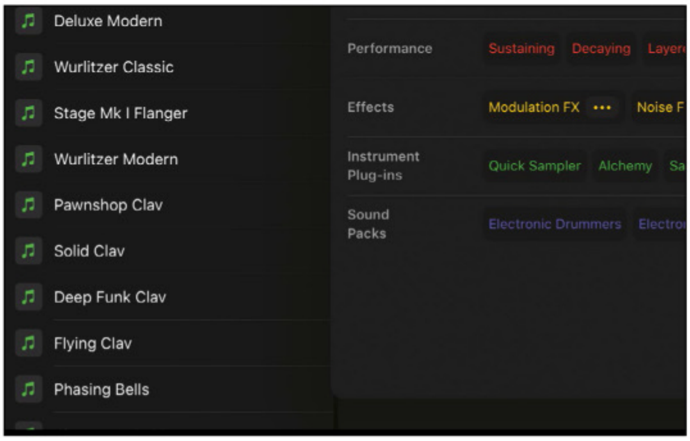
3. Creating a song part and exploring the new workflow



1 > Start a new project ('+' symbol top of screen). You can load example projects, sounds or lessons or start from scratch (hit Tracks or Live Loops). As with desktop Logic this means choosing a track type. There are MIDI (software instrument) and audio options plus Drummer for beats and Pattern. Hit any to open the new browser.

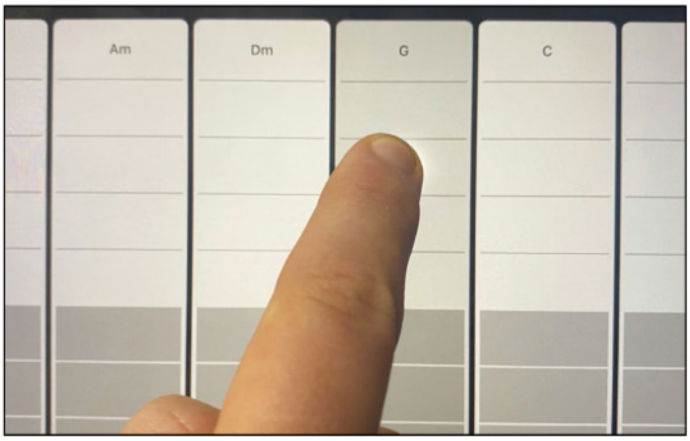


2 > The browser for loading in such sounds and instruments has been redesigned, making choosing what you want much easier. There's an all-new filter system to choose by instrument or description. A button on the right-hand side of the browser (highlighted above) opens up a huge set of filters so you really can focus in on a sound.

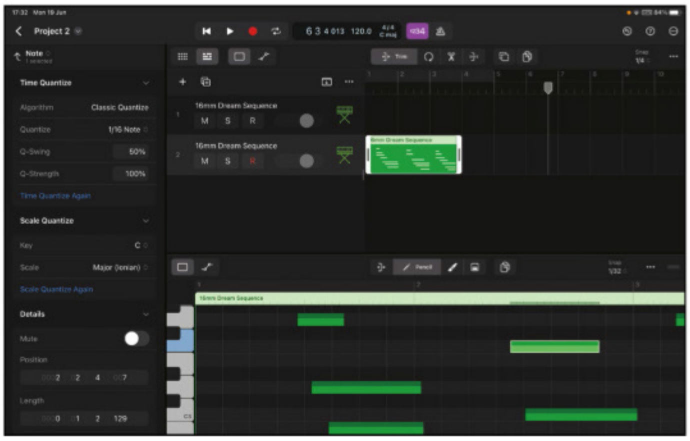


3 > As you filter, you'll be presented with a list of suitable sounds, and you can audition by clicking the notes on each one, which is a great way of quickly identifying what you want – even if you didn't set out with a specific goal in mind! Click and drag your chosen patch into the song and Logic automatically creates a track. Superb!

4 > Now it's a case of playing and recording your sound. For that we return to the Play Surfaces (bottom-right icon). Open the options by hitting the keyboard icon (bottom-left). Depending on your sound, you can choose a suitable way of triggering it here, the keyboard and drum pads being the most recognisable for melodic riffs and beats.



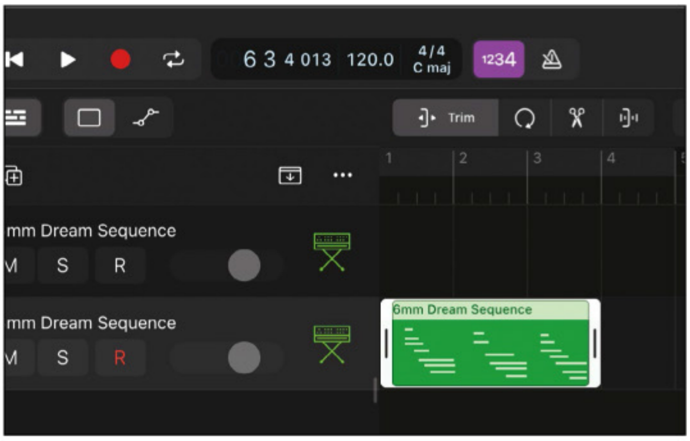
5 > But one of the easiest ways to get going with a song is to create a chord sequence. That might be harder in a standard DAW but here it is easy, just use the Chord Strips option which lets you play chords with one finger to create a cycling chord progression in seconds.



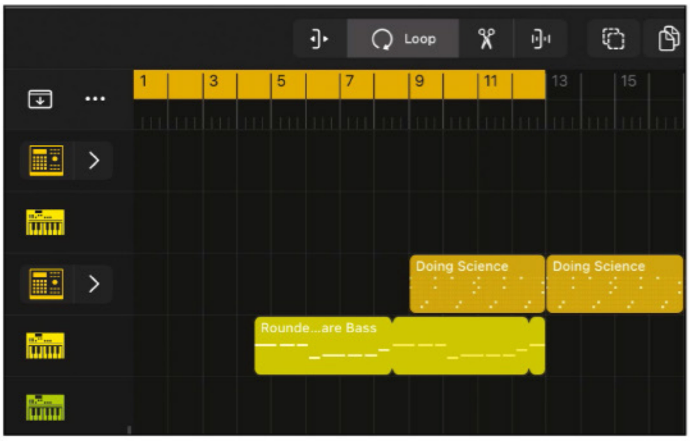
6 > If you need to edit the notes (length or position), return to the Edit screen (the pencil icon on the left above the Play Surface). Here you can also quantise notes by opening the inspector (bottom-left centre 'i' icon) and choose a quantise value from the drop-down menu.

> Step by step

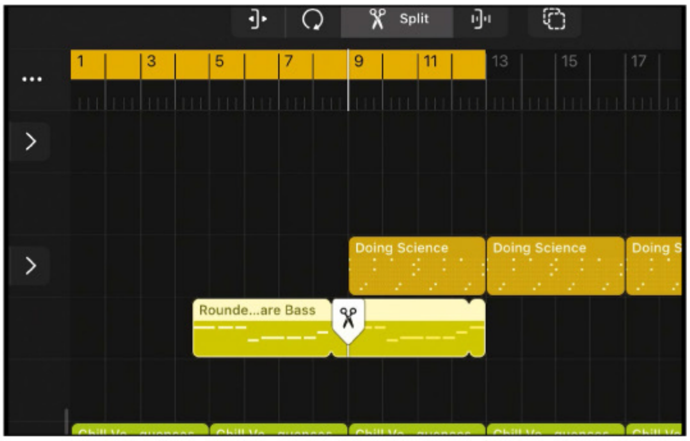
4. Arranging your song



1 > For the last part of this tutorial, we'll look at arranging a song with the several parts that you could create by repeating steps 1 to 6 on the opposite page. To arrange these parts into a song, we'll start by focusing in on the icons above the main arrangement window. The left-hand one is Trim and allows you to resize regions.



2 > Then the Loop icon – second from left – lets you loop parts. Simply click on the greyed our area above the whole arrangement to loop (click and drag to adjust the size), or set loop points by clicking and dragging the loop handles on each region. Easy!



3 > The next Split tool is well implemented. You click and drag it to the place where you want to split a region and then drag it down to effectively cut that region and Logic zooms in so you can see it in close-up detail. Very neat.

4 > Timestretching – the next icon – is much easier than on desktop Logic. Once again handles appear on your chosen region and you simply click and drag these to stretch it to whatever you choose. This is amazing and so much quicker than you might be used to.

5 > The final two icons let you select and deselect multiple regions and – the important bit for arranging (!) – copy and past parts. Select this icon and simply click and hold a region and it will copy itself so you can drag it and paste it where you like. No more Option button.

6 > That gives a quick overview on track and song creation in Logic Pro for the iPad. We think you'll agree that the streamlined approach is superb and well implemented. It's the same Logic... but different! We'll be back with more in-depth tutorials soon. **cm**

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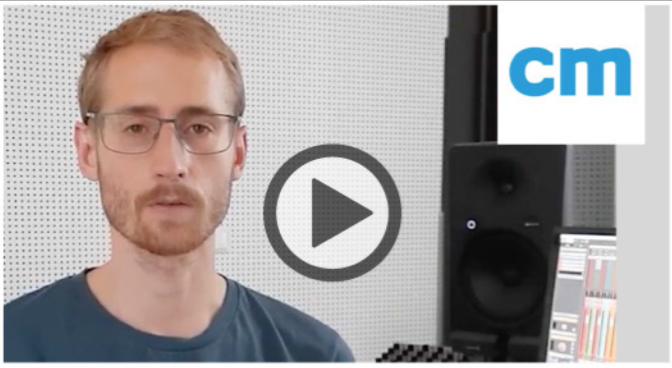

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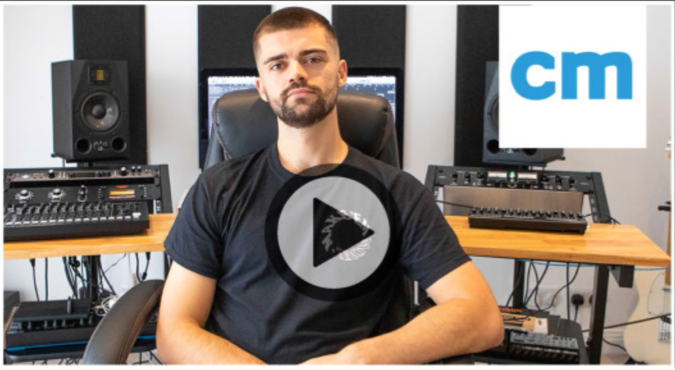

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The latest computer music gear tested and rated!

66__TONEWORKS CATALYST
Try jazzing up your riffs with Toneworks' inventive step sequencer that can host VST instruments

Our promise

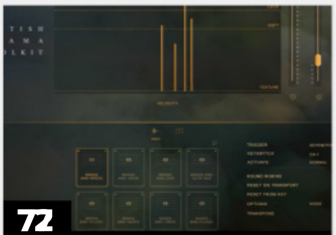
We bring you honest, unbiased appraisals of the latest computer music (and related) products. Our experts apply impartial testing methods, no matter how much hype surrounds it.

What the ratings mean

1-4__A seriously flawed product that should be avoided
5__This product's problems outweigh its merits
6__A decent product that's only held back by a few flaws
7__Solid. Well worth considering
8__Very good. A well-conceived and executed product
9__Excellent. First-rate and among the best you can buy
10__Exceptional. It just doesn't get any better than this!

68 Erica Synths Zen Delay Virtual

70 Sonora Cinematic Verticale



72 Spitfire Audio BDT: Brass and Reeds

74 Air Music Tech Air Delay Pro

76 Baby Audio BA-1

78 Nektar Aruba

80 Soundware round-up

Computer Music Innovation Award – Awarded to products that challenge existing ideas and do something entirely new

Computer Music Performance Award – A product has to really impress us with its functionality and features to win this one

Computer Music Value Award – If the product exceeds expectations for its price, it will receive this gong

Computer Music Editor's Choice Award – In the opinion of the Editor, the best product reviewed in the magazine this month

INTERACTIVE BLOCK DIAGRAM
Use individual modules or run all at once for more complex pattern generation

PARAMETERS MODULE
Sequence any synth parameter with three lanes of modulation

PRESETS
Load/save presets which include patterns, chord sets and synth settings in one

CHOOSE YOUR SYNTH
Load any VST or AU instrument directly into the plugin

STAY IN KEY
Pick your root note and key from 10 options, and add some swing

RANDOM RANGE
Shift-clicking on the dice lets you pick a minimum and maximum range for randomisation

GLIDE
Setting the gate time to 100 gives you ties for creating longer notes and glides

DIRECTION
Direction options include forward, reverse, ping-pong, pong-ping, Brownian, or random

SEQUENCER
Up to 32 steps with six direction options, and randomisation

Toneworks Catalyst

€79 PC MAC

Bored of programming via the piano roll? Try jazzing up your riffs with this inventive step sequencer that can host VST instruments

> Danish company Toneworks brings a fresh take on the humble step sequencer with its first product release, Catalyst. It's a flexible programming tool with a 32-step sequencer, harmonizer, and arpeggiator. However, its unique trick is the ability to host VST or AU instrument plugins, thus saving time with MIDI routing headaches. You can also sequence synth parameters directly in the plugin, leading to some complex and intricate-sounding patterns.

The first thing to do when you load Catalyst, is to scan your plugin folder for VST/AU instruments. Once fully scanned, you can select the Synth Plugin page and choose an instrument from the list. We opened an instance of u-he's Diva, which filled the lower portion of the GUI and didn't quite fit our screen. Thankfully you can resize the GUI, from 40% to 150%.

The next step is to choose a root note and key to work in. Options include major/minor, Dorian, Phrygian, Lydian and Mixolydian modes, and harmonic and melodic major and minor. You can now draw in some notes in the Sequencer module. Rather than semitones, the note divisions are degrees of the scale, so anything you input stays in key. You also have sequencer lanes for velocity and gate time, and buttons along the bottom to select if a note is played or not. All four rows have a randomise button on the left, with the ability to select a maximum/minimum range for more controlled results.

Sequence and ye shall find

Once you have a sequence, you can highlight selections and move groups of values, copy and paste, and shift the values left and right. There's also a slider to select from 1 to 32 steps, which affect all lanes at once, so you can't create more organic variations by having different lengths

A fun sequencer plugin with unique features that encourage you to generate some interesting patterns

for the velocity and gate time. Further controls at the top allow you to change the sequence rate, octave and direction, with six options. You can also program up to five patterns, which you can switch between using the black keys on the keyboard, and then transpose using the white keys. This makes for a simple but effective way to perform your patterns and try out different variations whilst staying in your chosen key. Overall, it's simple but effective editing, although it would be nice to have a probability amount affecting whether a note will play or not.

Mind that tone

After the Sequencer we come to the Harmonizer, which creates full chords from single notes. It plays the seven fundamental chords from the selected key, and you can choose to add 6th, 7th or 9th notes to each chord, change the inversion, or add additional notes above and below by increasing the Density slider. This then feeds into the programmable Arpeggiator, which is similar in layout to the Sequencer in that you have up to 32 steps, and pitch, velocity and gate lanes. There's also the Chord memory function that essentially works like a latch, and a Repeat function that plays each step twice. Both of these modules have Randomise buttons so you can quickly generate new chord shapes and arp patterns at the click of a button.

As each module can be switched on/off, you could just use Catalyst as a simple sequencer or programmable arpeggiator, or you could use it with a keyboard as a one-note chord-triggering tool. However, the real magic comes when you combine all three. You could program a fairly simple and sparse sequence over 32 steps that feeds into the Harmonizer to generate a more complex chord progression, and then add the arpeggiator to create exotic-sounding, sweeping melodies that you'd never dream of simply using a piano roll. You can then experiment with changing the key or elements in a single module to see how it affects the rest.

Catalyst is a fun, well-designed sequencer plugin with unique features that encourage you to generate interesting and complex-sounding patterns. There's still room for improvement, but it's a good first version and we look forward to seeing where Toneworks takes it next. **cm**

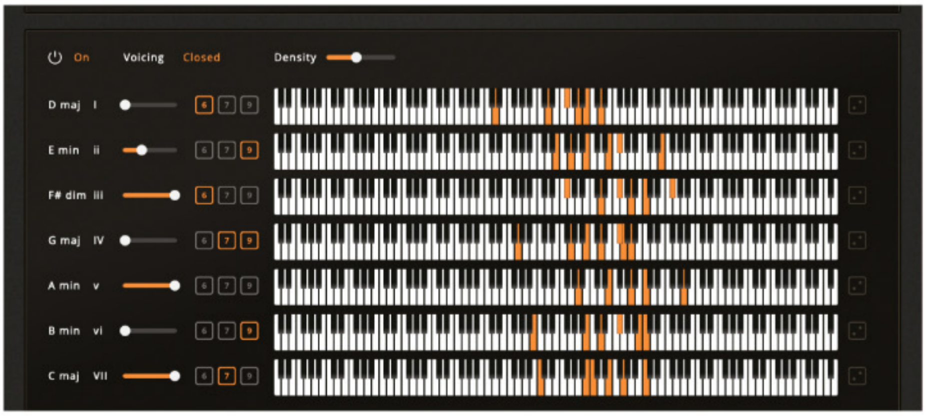
Web www.toneworks.io

Modulating unusual parameters is a great way to get more experimental-sounding patterns

Parameter modulation

Alongside hosting instruments, one of the most unique features is the ability to modulate up to three parameters using three independent lanes in the Parameter module. You simply map which dials or sliders you want to control on the Synth page, and you're good to go. It's an easy way to breathe unique life into any sequence, especially on synths that don't have much built-in modulation. You could also choose to modulate uncommon parameters like the reverb amount or delay time for more unusual details.

That said, only having three lanes feels a little limiting, and (as of writing) you can't then automate any other synth parameter in your DAW. You could try routing the MIDI output of Catalyst to an external synth, or use the useful MIDI FX version in Logic. The only caveat here being that the parameter sequence page is greyed out. Hopefully, this can be reinstated along with CC control in a future update, alongside the much requested MIDI sequence drag and drop for copying patterns to your arrange page.



The Harmonizer page lets you edit each chord by changing the inversion and adding 6th, 7th to 9th notes

Alternatively

Devicemeister Stepic
€39
No plugins, but you do get features like eight lanes of CC modulation and per-note probability

Audiaire Zenith
(rent to own via Splice, $78 total)
Customisable UI, great modulation options, and CC/SysEx functionality (to let you control other synths)

Verdict

For Quick and fun sequencing
Hosting synths speeds up workflow
Helps generate unique ideas

Against No per-step probability
Only three parameter lanes
No MIDI drag-and-drop

A fun, fast and intuitive sequencer that's a few updates short of absolute greatness

8/10

Erica Synths
Zen Delay Virtual

£155 PC MAC

Modelled on 2019's hardware delay, the virtual incarnation of the knob-packed atmosphere-carver surpasses its parent in more ways than one

> There aren't many modern hardware effects units that could be said to have been instantly iconic, but 2019's Zen Delay – a collaboration between Coldcut and Ninja Tune co-founder Matt Black with Erica Synths – had both the sonic clout and all-important aesthetic allure to captivate all who dared tinker with its (not insubstantial) knobs. Fitting then, that a scant four years on, a plugin version has been released that replicates the unit's lush analogue and digital signal paths, as well as presenting a whole host of new abilities that take this delay and modulation monster into new frontiers.

Zen at work

Zen Delay Virtual offers five unique delay algorithms, a multi-mode filter and a fiery overdrive. Harnessed either in isolation or in tandem with each other, sounds can grow and sprawl in fascinating and satisfying new ways. A major facet of the virtual version is the all-new LFO page, wherein you can set and record modulations via extensive time setting and cutoff controls. More on that later.

The very first thing you'll notice in 'ZDV' is that the scalable UI is an entirely faithful recreation of a top-down view of the original hardware unit, with the main control knobs exactly where they are on that box of tricks. This Main View is essentially nine core knobs (Delay Time, Feedback, Delay Mode, Dry/Wet, In Level, VCF Cutoff, Resonance, Drive and VCF Mode) while a Tap control allows you to set your own delay tempo if the plugin isn't synced to your DAW. While not quite as satisfying as grappling with one of those chonky knobs on the hardware, it's still nice to get the design aesthetic of the Zen Delay reflected in this 2D version, but it's perhaps not quite as visually impressive as other software delays.

It can concoct genuinely captivating delays, demanding you to get creative, and mangle settings

The Delay Time control can be set to between 3ms to 5 seconds, and it can cleverly sub-divide the tempo to match the DAW's, with 12 o'clock being exactly in-sync to the incoming BPM, spawning divisions and multiplications correlating to that input. This makes the creation of interesting rhythmic delays a very smooth process. We accelerated the impact of an 808 kick, while subtle pitch-shifting via the Tape mode injected some crackly analogue character in no time. In addition to Tape, the other delay algorithms include Digital, Tape Ping-Pong, Digital Ping-Pong and Vintage.

Shut up and drive

While many of the knobs adjust the levels of impact the virtual unit has upon the signal, the filter and drive sections open up a broader layer of research. The 24dB octave filter section presents numerous filtering modes. Meanwhile, the drive section, when pushed to its limits, causes some unpredictable, utterly sound-transforming results. So far, so akin to its tactile parent, but where the software version really comes into its own is via the modulation controls, found within the Modulation and Options page. Here, you're able to modulate the delay times, filter cutoff parameters via a range of different waveshapes, as well as affect the routing between the delay and filter stages. This adds a fresh avenue delay movement programming. It's a neat touch for Erica to present this extra kinetic functionality to the plugin, making it an attractive offering even to those who spent some time with its hardware parent, and far more than just a software clone.

Zen Delay Virtual then, can concoct genuinely captivating delays, demanding you to get creative, and manually mangle the filters, the delay-types and set interesting modulation to work; from adding emotive echo to instruments, to making beats, basses and vocals breathe in entirely new, unexpected ways. **cm**

Web www.ericasynths.lv

Zen Delay Virtual adds parameters that users of the hardware may not recognise

Above and beyond

Did you plump for an original hardware unit and are now trying to determine why on earth you'd ever need a software version? Well there's a whole lot of additional meat on the ZDV's bones. The new modulation options really do bump the software version of Zen Delay up from the original hardware unit's abilities. Aside from the wide-ranging modulation controls mentioned in the main review, another fantastic facet is using customised routings, meaning you can insert filters after the effects stage, and a handy diagram makes this simple to visualise, too. It also, usefully, has a robust preset management system that means you can organise and categorise your own custom-made sounds. Meanwhile, sublime, ready-to-go artist presets from the likes of Dr. Walker, Nerk, Hora Music and Kiss Nuka demonstrate Zen Delay Virtual's expansive capabilities. What you lose in a sexy hardware unit, you gain in much more precise sound-carving and neat organisation.

The original hardware was famed for its not insubstantial knobs, which are reproduced here, albeit in 2D

Alternatively

Valhalla Delay
$50
Bridging classic and modern delay approaches, Valhalla Delay is a flavoursome budget option

FabFilter Timeless 3
£110
Despite its vintage-toned delays, filters and creative effects, Timeless 3 has an undeniably futuristic feel

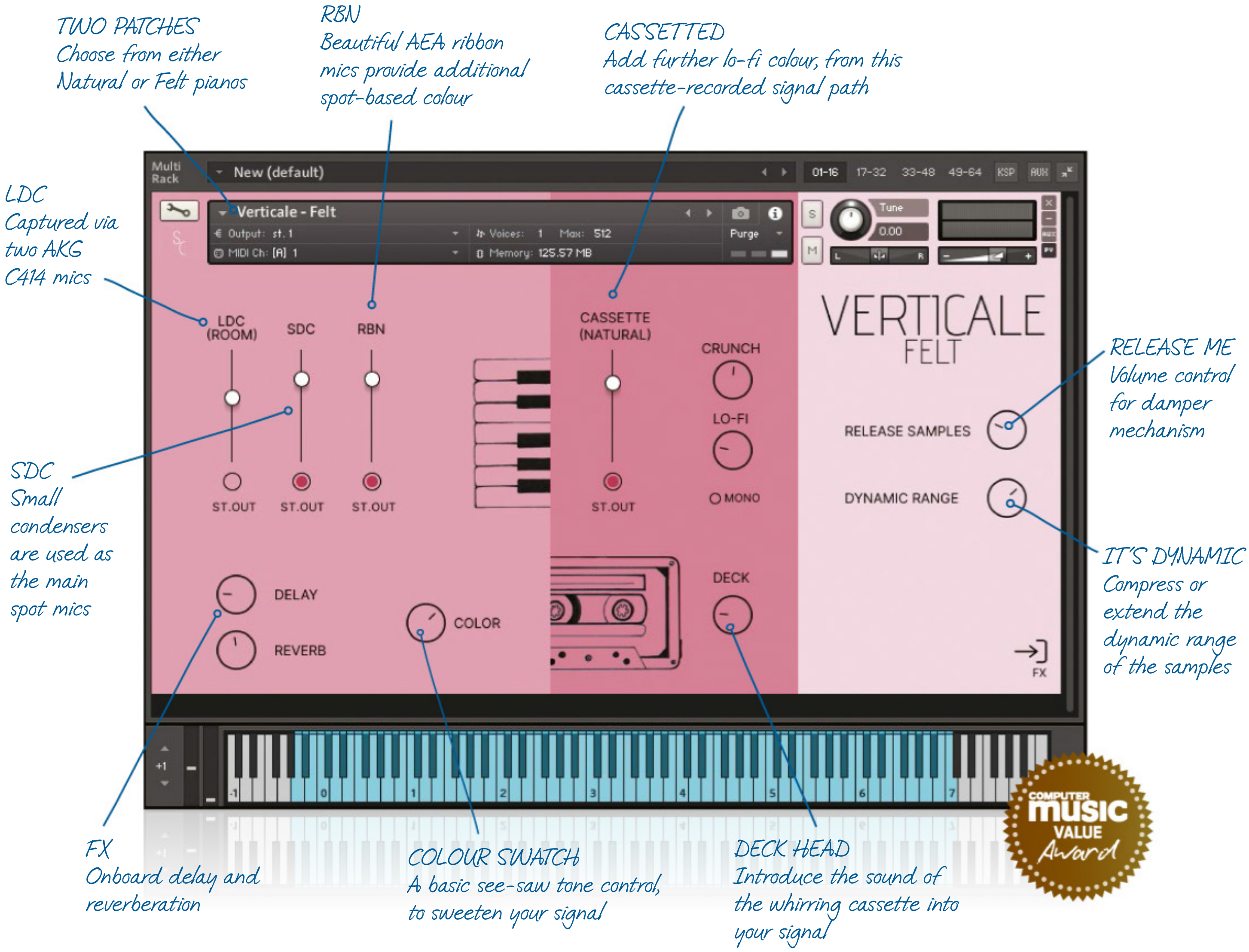
Verdict

For Exceptional, valve-driven effects
Great delays and simple-to-use filtering
Expanded modulation and routing controls

Against UI is unit-accurate, but perhaps a bit too 'basic' when compared to its rivals

A fluid transition of a modern hardware classic into a versatile software delay engine, we'll be keeping ZDV close...

9/10



Sonora Cinematic Verticale £49

PC MAC

Creating the perfect felted upright piano takes time, perseverance and four layers of vertical felt!

> Upright pianos have always been a popular instrument for conveying sensitive and intimate textures in production. Ranging from singer/songwriter material, to televisual scoring, the place of the upright is secure. However, this domain has been infiltrated in recent years, by the use of felts, creating an even softer and more intimate texture.

Upright and Verticale

The name Verticale is associated with the name given to upright pianos in Italy. The package itself constitutes a perfectly formed Kontakt instrument, which is NI library compliant, providing two patches; a natural upright piano, alongside a felted version of the same instrument. Unusually, and in something of a first, the felted iteration uses four layers of felt, rather than what would be the more usual single or double layers.

Regardless of piano version, there are three microphone signals available; large diaphragm condensers (AKG C414s) capture the room, while there is a choice of spot mic, provided by either small diaphragm condensers (Neumann KM 184) or ribbon mics (AEA N22s).

The relatively muted effect of the four layers of felt produces some interesting overtones. It is considerably muffled if compared to other examples of felt pianos on the market, resulting in a sonority of tone, particularly in the middle register. This area might require some equalisation, while the upper register is utterly

Upright pianos can be hard to capture, which is exactly why a library of this kind can be so useful

sublime. It's not overly bright, but still pure, while adding a degree of reverberation results in a singing quality, which is hugely appealing.

We found ourselves continually drawn to the more distant signals provided by the 414s. The spot mics are very characterful, which is exactly the kind of thing you want in a library of this kind, but the ambient support provided with the room miking really bolsters the sound, through a sum of parts.

Au naturale

The un-felted upright, simply labelled Natural, provides yet more examples of character. This intimate piano provides moments of detuning, with the odd resonant 'twang' creeping in from time to time.

If you play the samples too heavily, there is a sense that the attack becomes overbearing, particularly in the lower-middle register. The addition of some DAW-based compression helps in this regard, while the overt harshness of the hammers can be extremely useful in the upper register. With some further application of reverb dialled in, the striking effect is exactly what it claims to be – striking!

The central strip of the interface provides a further sample signal path. Created by recording via a high-speed Portastudio, the Cassette-based signal delivers a degree of lo-fi. It's linked with a lo-fi emphasis control, which dispenses distorted impurity, on demand. For a touch of added realism, there is also a straight volume pot, linked to the sound of the whirring tape, although thanks to its high-speed operation, it does sound a little reminiscent of a projector in full flow.

The final layer of felt

Apart from the upfront-signal paths, there are a few other niceties to add to the overall sonic makeup; Release samples can be dialled up or down, via a separate volume pot, with a further pot to dial up or down the dynamic range. There is also onboard Delay and Reverb, with a simple but highly effective Color pot, which see-saws the overall tone of the samples.

Upright pianos are, by their very nature, full of character. They can be very difficult to capture in recorded form, which is exactly why a library of this kind can be so useful. It provides sonority, colour and pianistic personality in a perfect little package, which is a rare commodity in a sample suite.

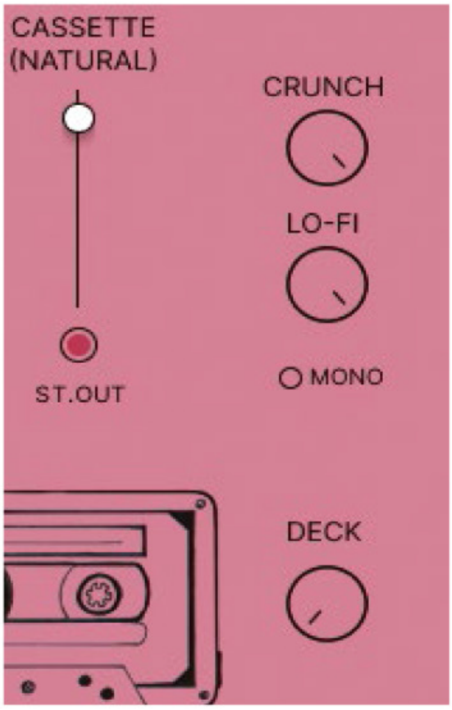
You can never have enough piano samples to call upon, and Verticale will deliver a perfect addition for any producer who regularly requires uprights. **cm**

Web www.sonoracinematic.com

Jon Hopkins' Yamaha upright piano is a star in its own right

Knocks, squeaks and more

It's been pretty difficult to avoid the rise of the felt piano into the production psyche, over the last few years. Apart from becoming a media composer's favourite, it can also be found nestling in the catalogues of reputable and creative artists. One such artist, Jon Hopkins, has made an enormous feature of his very own Yamaha upright piano which, while demonstrating its state of antiquity, also plays host to a number of characterful sounds. Its pedal mechanism and woodwork creak under strain, while it's in play, but rather than removing the imperfection and character, Hopkins decided to make a feature of many of these sounds in his music. With repeated visits from a piano tuner, offers to fix the noises were turned down, in favour of exploiting every noise and nuance that his real piano has to offer.



The crunching of cassettes! Not the sound of plastic underfoot, but cassette-based sampling with distortion

Alternatively

Spitfire Audio Labs: Soft Piano
Free
Continues to be one of the finest – and most used – examples of a felted upright

Spectrasonics Keyscape
$399
A wealth of colour, in both acoustic and electric versions, with a newly included double-felted grand

Verdict

For Intimate piano sounds
The quad-felt piano samples feel unique
Three beautifully blendable mic sources
Lo-fi cassette based samples add grit
It's chock-full of character

Against Some equalisation needed
It might have limited appeal and use

You just can't argue with the rise of the upright, and Verticale provides a ton of pianistic character, in a tidy Kontakt form

9/10

Spitfire Audio PC MAC
British Drama Toolkit: Brass and Reeds £169

Whether you're scoring a film or scouting for evocative textures, Spitfire has a dramatic new proposition to capture your imagination

> Spitfire Audio doesn't attempt to disguise its passion for musical scoring to picture, through an ever-swelling catalogue that equips modern soundtrackers brilliantly. But is there more to its products, for those who might want to produce music away from a narrative?

By jove, it's British!

The second and much anticipated BDT shadows Spitfire's initial BDT release; once again, Spitfire has called upon the amazing talents of Samuel Sim, a British TV composer with an impressive roster of credits across BBC TV and Netflix. Much of his work is based around narrative scoring, so you can see where BDT might lead.

Unlike the more bombastic orchestral libraries that we find in the marketplace, this package continues the subtler ethos of the original BDT, focusing on intimate sounds (which for the most part react according to the amount of velocity that you employ in your playing). BDT Brass and Reeds uses a slightly different palette of sounds from before, with a complement of both brass and wind instruments, some of which are not your more usual choices. The Brass contingent is very mellow; tuba and trombones are joined by the less obvious tenor horn and flugelhorn. With a darker timbre, there's no sense of raspiness.

The Reeds section bolsters the brass, with contrabassoon (a version of bassoon which is one octave below a regular bassoon), cor anglais and oboe. A saxophone section also gets an outing, with representations from baritone, alto, soprano and the irregular bass sax, all included. There's also a recorder ensemble

The mellow and intricate nature of much of the patching extends way beyond the product's USP

which, although strictly speaking a wind instrument rather than reed, adds more mellow colour to the patching.

Getting patched

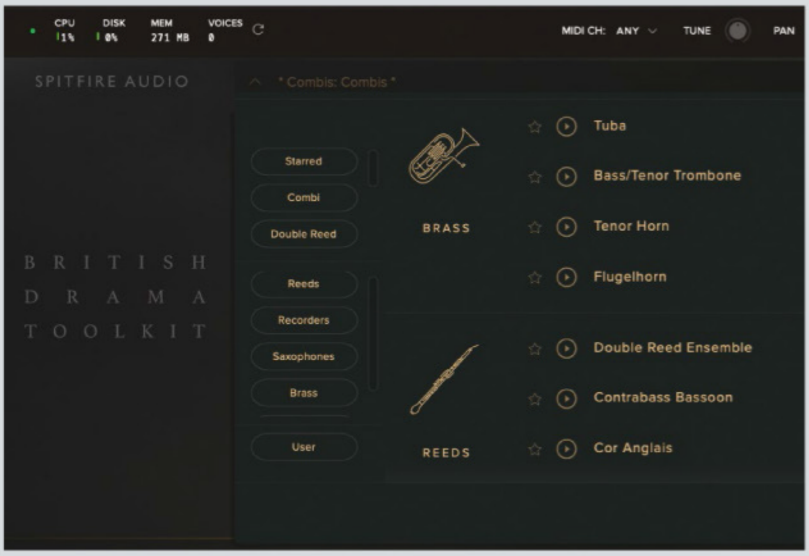
All of the instruments are provided in multiple articulation and patch settings, although this is very much about texture, beds and colour, rather than any overwhelming sense of musical phrase. This is not the library for you if you want a legato flugel or cor anglais, as becomes immediately apparent when playing patches.

The first 15 patches are all layered combinations, or Combis. You'll find brass layered with reeds, reeds layered with flugelhorn, and so on. The colour of each note is chosen according to the velocity of each note. You might play a softer note, which yields a brass colour, while a higher velocity note might promote an oboe to pop its head above the parapet. It takes a little practice to find your point of equilibrium, but it can quickly become as engaging as it is satisfying.

The independents

While the Combis are immediately gratifying, the patches at the independent instrument level arguably provide greater control and flexibility. The articulation set is also unique to each instrument, so you'll find basic brass long notes and swells, alongside some unique oddities, such as chattering saxophones, and recorders going 'chiff' or heavily bending the pitch. These can be fun starting points.

We did find a few little annoyances along the way though; there's a lack of round-robins in some patches, giving rise to singular notes which unintentionally meander considerably in tuning, or a chattering alto sax which oddly provides far more silence than chatter. Arguably, the space around the notes is just as important, and it will depend on how you intend to use BDT:B&R as to whether those silences work for you.



Acoustic instrumentation not your usual cup of tea? Feel free to mangle into something more

No drama, please

As already mentioned, Spitfire makes no bones about producing samples geared towards film and TV composers, and while this is something it prides itself on, it shouldn't put you off trying out its wares for other uses. The reality is, there's something for everyone throughout the catalogue, and it just depends on the style of music that you compose or produce, as to whether this fits your production bill. In the case of the BDT under review here, minimal compositional input can yield some truly wonderful textures. The acoustic makeup might, again, sound an alarm for any overt electronic musician that it's not for them, but not only can BDT provide unique pads for your music, they can also sit perfectly alongside synthetic instrumentation, or act as the perfect starting point for extreme processing. It sounds organic, in its initial form, but you don't have to leave it that way, and with DAW-based effects being as comprehensive as they are, you won't have to go very far to find an entirely unique sound world to trigger new creative avenues.

This is another unique addition to the Spitfire lineup, and one that is quite endearing. The mellow and intricate nature of much of the patching extends way beyond the product's USP. If you are in the business of composing or producing music which could be regarded as cinematic in nature – whether literally or otherwise – this could provide plenty of inspiration. Given its complex acoustic makeup, it could be regarded as quite the bargain. **cm**

Web www.spitfireaudio.com

Alternatively

Slate + Ash Landforms £349
Stylishly presented acoustic instruments, with interesting flourishes, recorded at Real World

Spitfire Audio British Drama Toolkit £169
You can't not mention vol. 1 of BDT here. A string-and-woodwind-based palette, for soundscapes and more

Verdict

For Very interesting instrumentation
Gratifying to use from the get-go
It can sound mellow and angsty
BDT's sonic representations can go way beyond the cinematic

Against Lacks round-robins in places
Occasional unintended tuning issues

Instantly usable for anyone who enjoys British drama, but with the capacity to extend way beyond this remit

8/10

With options for close and ambient mic'ing, you can hone your sonic requirements, or dial in the on-board reverb

AIR Music Tech
AIR Delay Pro £50 PC MAC

Not your everyday delay. AIR Delay Pro brings bundles of otherworldly shaping options to the table, and serves up a hat-trick of unique additions

> For those of a certain age, the name Wizoo Sound Design might ring some (dusty) old bells. The German software company was at the forefront of plugin design back in the early days. Subsequently hoovered up by Digidesign and folded into Avid's Pro Tools, many members of that original team went on to form AIR Music Technology. It's a team that has subsequently spawned some incredible wares, including the recently released '80s-leaning softsynth, the Jura (that we'll be spending some time with shortly). Today though, we're taking a look at the company's newest effect plugin, AIR Delay Pro; an adaptable delay that promises a great deal more than you might initially expect from first glance.

Firstly, the UI is a neat, colour-coordinated affair, with the current delay rates and time divisions visible at the top half of the plugin, along with the option to switch from Digital to Analog modes. There's a nice rendering of the circular environment, which visualises any changes made in real-time. Rotary controls for modulation and LFO are on the bottom left-hand side, while EQ settings and input/output controls sit on the right, alongside limiter, distortion controls and a shimmering chorus effect. There's also a stereo widener which can increase or decrease the enveloping nature of the delay across your mix. So far, we're on fairly standard ground, but AIR Delay Pro's triple-headed selling point is its platter of neat, unique, capabilities.

Follow the bleeder

The first of these three abilities is Diffusion, an effect that allows you to smear the rougher edges of your delay and place it almost akin to a reverb. Controlled by a simple on/off switch, a master rotary stereo widener and a fader

> The experience of using it for a variety of studio tasks results in a plugin far greater than the sum of its parts

that increases or decreases the virtual space, Diffusion offers a brilliant method of making those kinetic delays feel more organic, and less like a layered-on effect. The reflections feel very realistic, and those more animated delays sound as if they're running around actual spaces.

Next, there's Autoclear, which instantly cuts the delay when another note is hit. It's a godsend for those of us who struggle with wrangling massive delays which then bleed out over quick-fire chord sequences or slinky melodies. With Autoclear, the delay abruptly ceases, then triggers again in simpatico with the next notes. It's something we didn't really consider before, but now we've experienced it, we can imagine using this a lot more frequently, particularly when tracking live instruments.

The third flagship selling point of AIR Delay Pro is a process called Envelope Follow. Essentially a way of manipulating the time, feedback and delay amounts based on the ceiling you've set in an envelope window, three corresponding sliders adjust the elements you want to evolve over time. Again, this isn't something we've previously considered to this degree, but the results can lift a sub-par delay and make it contort in ways akin to a synth. While individually well worth interrogating, these elements work to build out AIR Delay Pro as a substantial delay-crafting toolkit.

Presets range from the familiar to the curiosity-stoking

Take it to the bank

As is typical with today's effect plugins, a range of presets are available. We were quite impressed by the quantity and variety of the pre-sculpted delays on offer here, from the straightforward instrument-aligned fare (Guitar, Keys, Drums, Bass) to the more audacious sound-transforming settings found within the Atmos and Mod pages. Some of those lured us in by their geeky labels ('Tardis or FX' and 'Yowl' in particular) but we stayed for the new inspiration to really go to town on some of our stock samples.

As with all presets, these should essentially be considered as starting points – or perhaps lightly dialled in to a track element rather than going fully wet with any of them. It's a solid first port of call, and a fun way of surveying the massive breadth that AIR's Delay Pro is capable of.

Expect delays

Delay Pro is also available within MPC standalone and desktop systems, so if you're an Akai-hog, integration is seamless (both Akai and AIR Music Tech are part of the InMusic brand). AIR Delay Pro isn't just a checklist of isolated unique features, the experience of using it for a variety of studio tasks results in a plugin far greater than the sum of its parts. Whether used as a tempo-synced beat augmenter to create dotted delays or as a way of creating ghostly after-echoes of chiming guitar chords, lifting synth washes into a new domain or widening a bass sound, it will deliver. **cm**

Web www.airmusictech.com

The interface presents a neat map-style display of the stereo field

Alternatively

Erica Synths Zen Delay Virtual
$99
One of our recent favourites: lush analogue warmth with expansive LFO and animation controls

FabFilter Timeless 3
£109
FabFilter mastered the 21st century tape delay, with fluid modulation controls and effect-chain building

Verdict

For Broad delay toolkit with shaping options galore

Autoclear is the godsend we didn't know we needed

Envelope Follow brings delays to life

...and Diffusion adds greater realism

Against Not quite as characterful as some delays we've heard

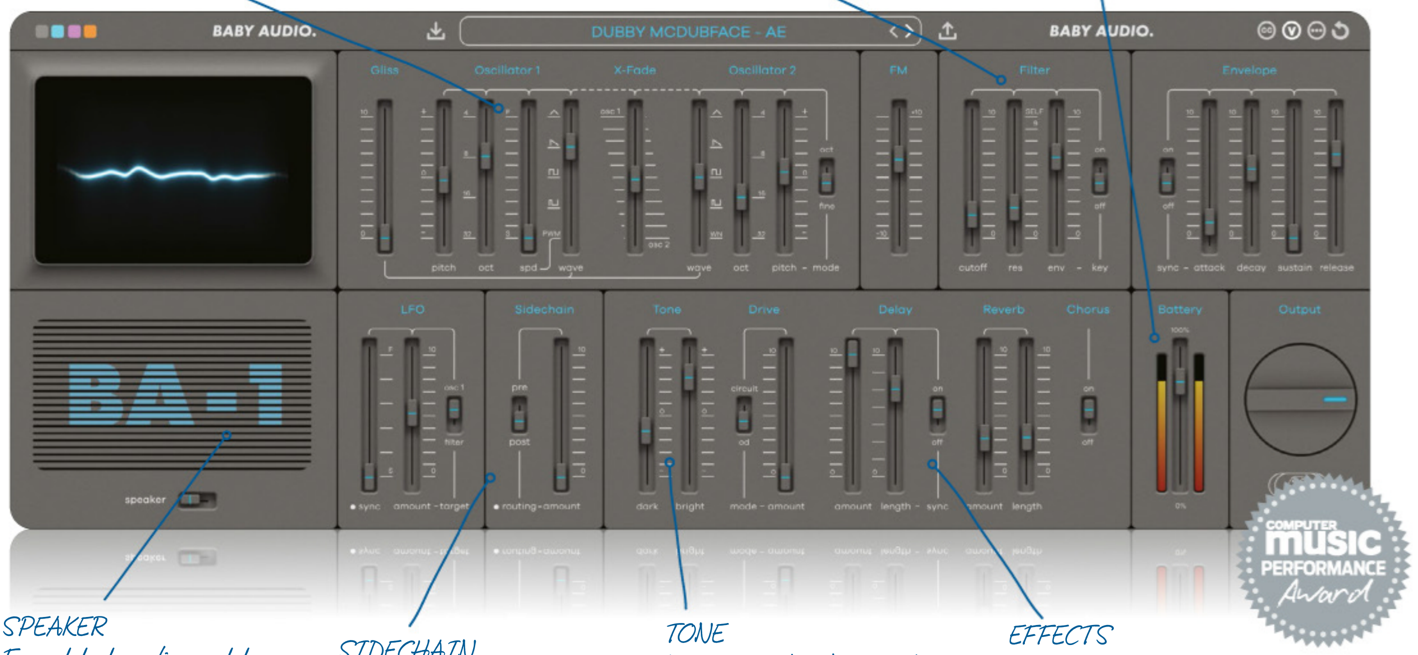
With three innovative additions at its heart, AIR Delay Pro is a transformative delay

9/10

OSCILLATORS
Double the number of those on the original CS-01, with fixed waveforms and FM

FILTER/ENVELOPE
A simple low-pass mimics the original's filter and the envelope can be applied to this and amplitude

BATTERY
Just like the original, the battery can run out. When it does, you get added noise and a bit of detuning



SPEAKER
For added realism, add some speaker distortion to make BA-1's sound even more lo-fi

SIDECHAIN
This brings in an instant pumping effect and increases its impact as you dial up

TONE
You can make the sound surprisingly thin here – perhaps just like the original – but fatten it up too

EFFECTS
You can't argue with the on-board effects; they are Baby Audio's best

Baby Audio BA-1 $99

PC MAC

Baby Audio has set the effects world on fire with a string of top releases. Can it do the same for synths with its first instrument plugin?

> It's fair to say that Baby Audio has come from pretty much nowhere to be a dominant force in the world of plugin effects. Its Super VHS tape sim, TAIP saturator, Parallel Aggressor processor, Comeback Kid delay, Crystalline reverb, Spaced Out reverb/delay and Smooth Operator balancer have all scored at least a 9/10 from us. So when it announced its first synth, it was big news. The suitably-titled BA-1 is its name and, unusually for Baby Audio, it's not a new design, but based on the Yamaha CS-01.

We say 'unusually' because Baby Audio has become well known for its unique creations that put ease of use and sounds above complex workflow. Sure, some harken back to classic gear – Spaced Out is a re-imagined Space Echo – but it's mostly treading new ground. So there was a slight tinge of bemusement when we heard about BA-1, as we can't wait to see the all-new BA take on synthesis. Instead, its first offering is an emulation of a decent, if not mind-blowing old mono synth.

But actually…

We're probably being a little harsh on both BA and the original Yamaha. The CS-01 has enjoyed something of a comeback in recent years, and is being employed for its gritty character across a variety of modern genres; indeed *Vintage Synth Explorer* say it's great for "cool little analog bass blips, bass lines and bass bubbles that are just perfect for today's electronic musicians".

Meanwhile Baby Audio has added some extras to the original, including an additional analogue-modelled oscillator, FM and polyphony, all the while attempting to keep the character of the original intact, going as far as to reproduce an emulation of the original on-board speaker for even more lo-fi. There's even an

BA-1 could easily be the filthy yin to a more rounded, cleaner workhorse synth's yang

option to drain the battery and bend the circuits for even more grunge.

Baby steps

There's no getting away from the fact that the signal flow is quite basic on BA-1 – it's supposed to be (see the box right for more on this) – but that also makes it very hands-on and tweakable for creating new sounds in no time.

Baby Audio has also included one more secret weapon with BA-1: its very own effects engine. And we know BA is a master when it comes to effects, so you get some brilliant delay, reverb and chorus settings which really help liven up the sounds. Just audition a preset and move from left to right through the various effects and you can transform a preset instantly, and with these effects alone.

As far as the included sounds go, there are many preset packs to sink your teeth into, and these deliver a surprisingly diverse set of results. Yes, there are plenty of gnarly basses and scratchy leads but also a lot more atmospheric pads and arpeggiations on offer, thanks to that bolstered polyphony (and like we said, the effects do add a very '2023' sheen).

There's no denying the '80s vibe and roots though, and we were constantly reminded of the days when we wore way too much black (sidenote: BA's T-shirt range is also pretty great) and listened to way too much industrial music. That being said, there's a lot here that could sit well in newer electronic music, especially that with a glitchy leaning. There's drift, detuning, noise, and whatever filth you want (and a lot of that comes just when you 'drain' the battery). BA-1 could easily be the yin to a more rounded, cleaner workhorse synth's yang.

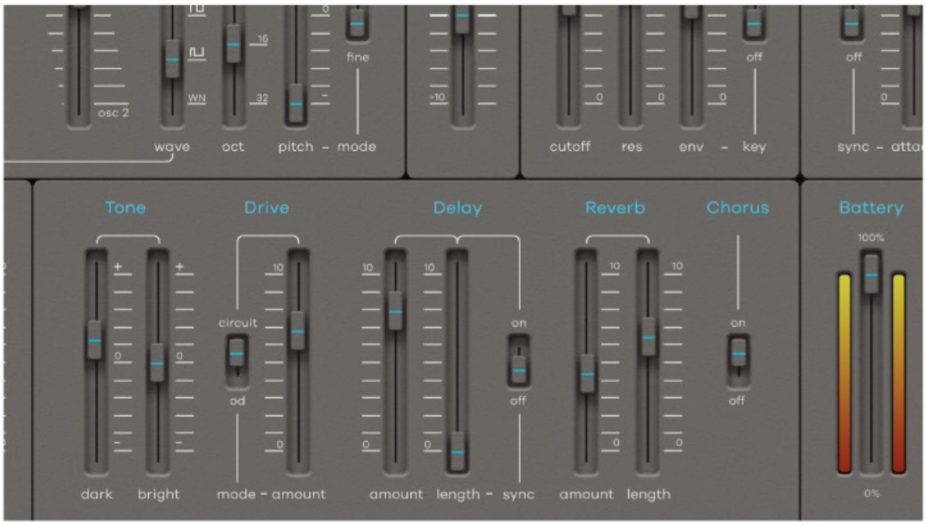
It looks and sounds a lot like the CS-01, but Baby Audio's BA-1 takes the dirt levels up and the lo-fi even further down, and it could be the gnarly beast of a synth you've been waiting for

BA-1 – simple is best

With two oscillators rather than the original CS-01's one, BA-1 already packs more of a sonic punch, but the signal flow and architecture is still straightforward. Both oscillators feature saw, triangle, square, pulse and PWM source ingredients while an FM dial adjusts the frequency modulation between the two. A simple low-pass filter is very much modelled on the original and an envelope can be applied to it and amplitude. A basic LFO is described as 'easy to master and hard to mess up' and with liberal sync-ing all round this is very true; no matter what you do, everything seems to work. This is especially true with the sidechain option that adds a four-four ducking effect which increases in drama the more you dial it up. The effects have been covered in the main text but the Drive is a highlight, and can add some real grit to your sound, while the reverb tries to bring it back into dreamland. And the Battery Life dial is genius; we want it on all of our synths.

Ultimately, BA-1 presents instant electronic fun, so very much bang on the money with the Baby Audio philosophy. It's another triumph then, after all, although we're still very much looking forward to an all-new BA synth. **cm**

Web www.babyaud.io



With proper effects including reverb, chorus and delay, BA-1 adds 21st century sheen to its 1980s dirt

Alternatively

TAL-BassLine-101
£56
This has a familiar '80s aesthetic, bass-heavy sonics and vibe, and is a similar price

Brainworx bx_Oberhausen
$249
A cleaner (and more expensive) classic analogue with a similar sonic architecture

Verdict

For Simple and invites tweaking
Beautifully nasty sound
Love the Battery Life dial!
Great effects bring it all up to date

Against Dirt won't be for all
Limited features (by design)

Baby Audio's first synth might follow in the footsteps of the CS-01 as an under-the-radar classic. It's gritty, dark, twisted and charming, just how we like our synths

9/10

Nektar Aruba £255

PC MAC

Sprucing up its MIDI drum controller with a raft of new features, Aruba offers a slick new way of performing your software drum instruments

> We're not necessarily hardware averse here at *Computer Music*, but it has to be said, we're typically inclined to let our sister title *Future Music* take on any new hardware drum and synth instruments that turn up at our door. Aside from saving on postage costs, we're always keen to channel our focus to the onus of our magazine: computer music-making. But, when we took Nektar's 16-pad drum controller for a spin, interfaced it with the versatile Nektarine plugin and sank into its incredibly fluid DAW integration, we realised that it was worth covering in detail.

Firstly, a little history… Nektar launched the first version of Aruba, then titled 'Aura' in 2020. Over the last three years, a series of updates to both the internal hardware, the Nektarine plugin, and the unit's moniker have essentially transformed this beat-building behemoth into a completely fresh instrument. Its 16 RGB pads are among the most sensitive we've fondled, offering dexterous scaling of velocity layers and instantaneous sample triggering. Aruba's internal step sequencer and built-in Repeat mode makes generating spontaneous patterns exceedingly easy, while the refined DAW integration – particularly with Ableton Live – take it beyond just being a simple finger-drumming pad controller, becoming an all round transport-controlling DAW interface.

Making a monster

While the hardware-end is suitably robust, for our *Computer Music*-angled money, the absolute joy of using Aruba and Nektarine in simpatico, comes with the ability to assign different plugins per-pad, meaning that you can construct a unique hybrid kit from your drum plugin arsenal extremely quickly. The UI of

> It pushes you to bring your drum samples and plugins together to craft per-pad combinations

Nektarine offers a top-down view of the pads, with each allowing for choke, volume, pan and mute/solo with effect inserts and sends for each instrument harnessed in the making of your modular beat monster. Plugin insertion is a doddle, while effect-routing is neatly presented via Nektarine's five-page UI.

One of our favourite attributes of Aruba is the way it pushes you to bring your drum samples and plugins together to craft per-pad combinations. It seems like that's what Nektar is encouraging here. Along with the rebrand of the hardware unit, comes a slew of ready-made software accompaniments: the T1 Tom synth, the S1 Snare, and K1 Kick, all of which work within the built-in DP-1 drum player. These serve as meaty additions to the existing roster of provided kits and samples, giving 45 unique kits and over 600 unique drum sounds in total, ready to go.

This leads us on to another computer-angled facet of the Aruba – with DP-1, you can import .wav and .aiff files into its slick UI, which includes a versatile range of tone-shaping abilities such as Attack, Decay and a nice filter and velocity section. DP-1 also offers users a retro-flavoured '1982' mode, which downgrades your sample to the deliciously crummy aesthetic of an 8-bit, early '80s-era drum machine sample.

Velocity settings can be adjusted to suit how you play

Under pressure

After initial tests we soon realised that we could modify the pad's sensitivity to work better with our Launchpad-honed fingers. While the unit itself has been set up for optimum responsiveness, it can be further tuned, scaling velocity curves to get the sweet spot for how you play. The pressure put upon these pads can – like similar MPE-angled devices – control dynamics such as sustain, or apply subtle pitch bend. While superb for finger drumming-based beat programming, the Repeat engine is easy to get to grips with, and is a fun way to add instant, rhythmic movement to your one-shots. The first of the six Solo and Mute buttons promptly switch to becoming repeat rate selectors, meaning you can tap out a kick and, keeping one pad depressed, have flowing hi-hats rippling away that you can briskly change the pace of. Bearing in mind how effectively Aruba works with software, this smooth pattern-making machine tempts us to fire up some of our softsynths, bass plugins and vocal chops, just to see what happens…

Fingertip-top

As with Nektar's Panorama range of MIDI keyboard controllers, Aruba can be put to work as an all-round DAW-managing hub, with pre-designed integration with most of the major DAWs covered. Ableton Live, however, is specifically favoured, particularly if you're using the top-tier Suite iteration. A special Max for Live plugin allows Aruba to take immediate control of all of the DAW's parameters, becoming a Maschine-like nervous system, as well as an elegant drum designer.

Aruba provides a strong hardware bridge into the software world, and that's really why we're affording it so much praise. That being said, it'd be remiss of us not to point out the extremely nifty on-board step sequencer. Pressing the 16 step buttons adds or removes note steps, and the play rate can be easily scaled. Best of all, while the step sequencer operates on an entirely standalone basis, if you're plugged in, then the resulting MIDI data is hoovered up by your DAW for further editing.

Less a standalone drum machine, and instead more like a rhythmic-leaning interface that can both manage your DAW and merge your plugins into the most bizarre and wholly unique instruments, Aruba is a time-devouring beat-maker, with a great deal more depth than first meets the eye. **cm**

Web www.nektartech.com

The Aruba features a MIDI out, a USB out and an input for a foot switch

Alternatively

Native Instruments Maschine
£539
This beloved beat-hub is also a nexus for controlling NI plugins, not to mention stellar DAW integration

Ableton Push
£879
If Live is your DAW, Push is still the ultimate way of interfacing with your rhythmic elements, and more

Verdict

For Simple to use
Instant integration with all major DAWs
Velocity-sensitive pads
Instant MIDI feedback on standalone step sequencing and repeating

Against The UI isn't massively user-friendly, but once cracked, it's fantastic

A colourful new addition to our studio, Aruba is a smooth, sophisticated beat maker, with a massive amount of depth

9/10

Soundware round-up

Sample Market

Artist Series 01: Mennie £35

This heavy set of expertly-crafted drums, percussion, synths and pads comes courtesy of Italian producer, Mennie.

Across 600 solid sounds the Poker Flat recording star serves up some seriously slick samples, built with class and skill, for all you cutting-edge house, minimal, tech, and garage producers.

Some prime old-skool analogue hardware and vintage synths have been booted up and sweated over to provide the weighty WAVs here. With each rinse-worthy result offering up its own unique tonal twists and turns in this cutting-edge collection of tough, top-tier noises.

It's the first release in an all-new artist series for the label, and a prime example of how to come out the gate swinging.

https://samplemarket.co.uk

9/10

W. A. Production

Sound Of Cyberpunk 4 $29.90

Across each instalment in this futuristic series the signature sound of cyberpunk has been defined as deliciously dark and techy. And, as we head further into the outer quadrant of moody and metallic music, the definition gets expanded more and more. The collection of deeply dystopian construction kits this time around pushes the sound design up a notch, too. With the unholy unity of man and machine getting tested to its limits. The sci-fi samples take in chopped breaks, techy bass, and enough glitched out synths and lead lines to soundtrack your next robot-rocking uprising.

www.waproduction.com

8/10

Audiotent

Noon £27

Say hello to a kooky library sampling the wonderfully weird Landscape Noon. This passive analogue drum synth is powered by control voltage, resulting in a deep, textured tone. Pulsing, squishy, modulating, fluttery, and rubbery sounds bump merrily along at 122bpm, in wet and dry. With a phat gang of equally freaky one-shots bundled in for good measure.

If you're on the hunt for a new dimension in sound to add to your house and techno backbones, say "Hi!" to Noon.

www.audiotent.com

8/10

Zenhiser

Lofi Chillsynth £41

A masterclass in dreamy synthwave. With each blissed-out texture and loop lifted onto a beam of audio sunshine and fired directly into your soul. The 2GB of melted melodies, atmospheric pads, and gently plodding drums in this set are sure to add booster shots of warmth and happiness into any tracks needing their spirits raising. Or, simply provide a cheery starting point, as you settle in to make your next batch of summery songs.

Tempos cruise along at 90-110bpm, with everything onboard bubbling on a sensually slow simmer. Mmmm.

www.zenhiser.com

8/10

Sample Tools by Cr2

Pop House & Vocals £15.99

Pop vocals so shiny you can see your face in 'em – and there's not a crow's foot in sight. The youthful hooks, hits and phases in this pumped up and positive pack will anchor your chart-ready tracks with radio-friendly readiness. And, joining these super usable and snappy toplines, are three fully-finished songstarter kits. Each one bursting with fresh-faced fun and funk, hand-polished to fit snuggly into the frothiest future house, bounce, and EDM hits you may have on the go. A great tool kit for aspiring pop producers to fill their loop libraries with.

www.sampletoolsbycr2.com

7/10

UNDRGRND Sounds

Psychedelic House £19.95

All the mind-expanding sounds and samples in this groovy set have been inspired by unconventional house heads like DJ Koze, Jackmate, and their other Pampa Records recording chums. There's hands-in-the air, wavy and wonky waves of synths to chew on, as well as dubbed-out chords and uplifting pads. And some punchy 4/4 drums to bring you back down to earth. Throw in some thought-provoking re-pitched monologues, vocal sound bites, and weird little SFX hits, and you have plenty to crinkle your brain over...

www.undrgrndsounds.com

8/10

Hydratek

FUTURA €14.99

Rejoice! The sound sorcerers at Hydratek are back, with more noisecore and IDM track fatteners to shake up your sample crates.

The sounds in this futuristic collection have been pulled from the quirky circuitry of the Korg Volca Drum – the digital percussion synth, famed for its unique brand of distortion and the like. The resulting mass of hits, loops, thematic folders and kits in this varied bundle have been purpose-built to unnerve noobs, and scare off fair-weather beat-makers. But, if you're made of stronger stuff, dive right in.

www.hydra-sound.com

7/10

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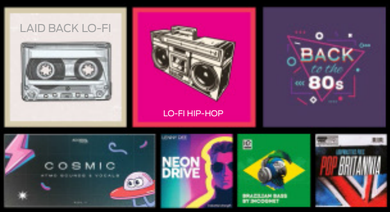
cm / free plugin

84 **ACUSTICA FIRE: THE CM COMP**
Our tutorial and video explains how to use this month's free CM plugin



cm / free samples

90 **THE LO-FI COLLECTION**
Our sample-crafters have carefully created some sublime lo-fi this month. Find out more on p90

cm / free videos

93 **MASTERCLASSES**
This month, our experts show you how to make punchy commercial bass and how to use level rides when mixing

cm / plugin suite

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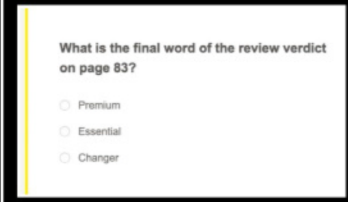

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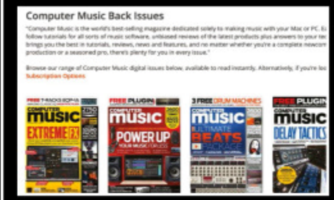


03 If you enjoyed that issue, you can still purchase our back issues via **bit.ly/pocketmags–cm** and downloads for those will be kept at **filesilo.co.uk/computermusic**

>Free software PC MAC

ACUSTICA AUDIO FIRE: THE cm COMP

We've got a specially tailored version of Acustica Audio's one-knob Neve tribute this month, here's how you can get the best from it

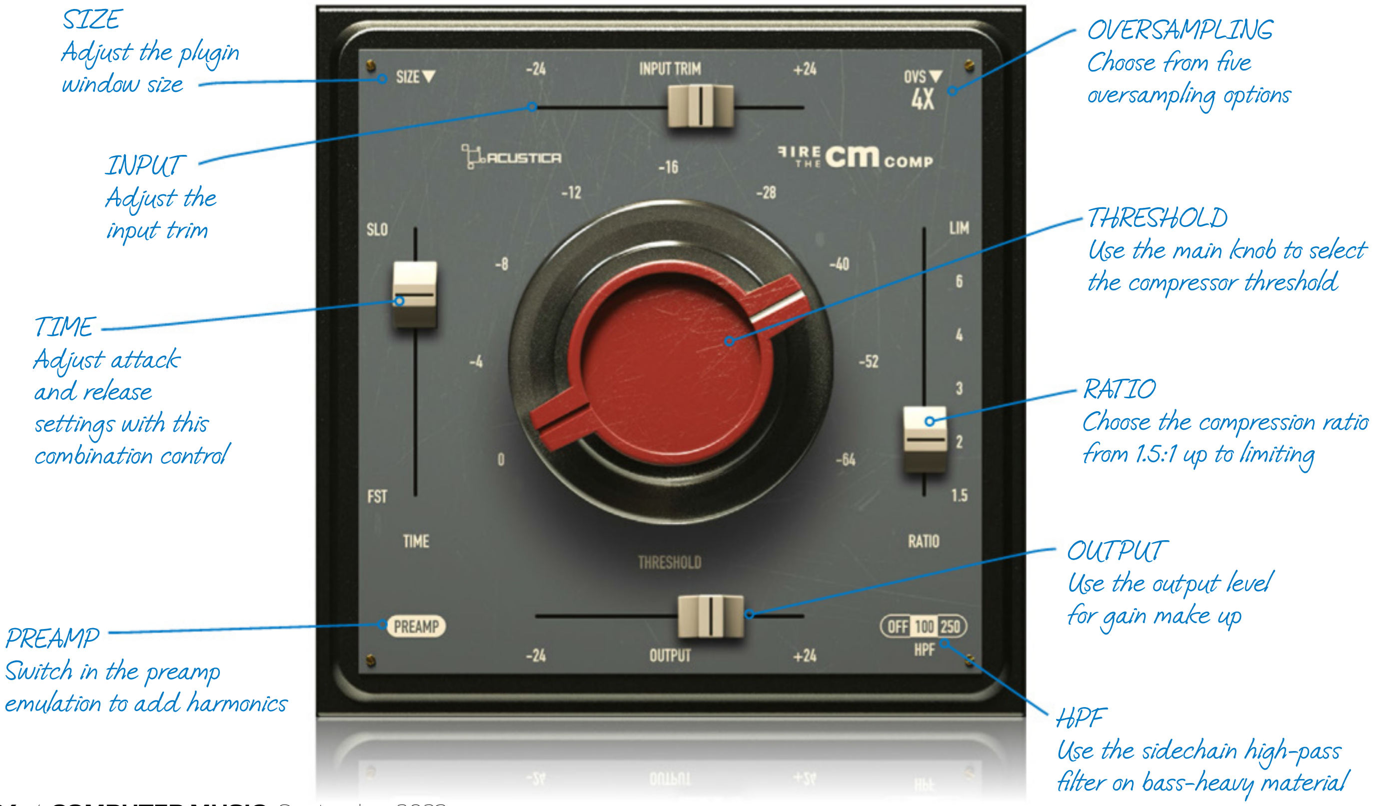
> Acustica Audio has an impressive record for developing plugin emulations of classic and rare hardware, delivering plugins that not only sound great but also prioritise the user experience with intuitive and expanded controls with fantastic visuals.

This month we're excited to offer an exclusive new *Computer Music*-branded Acustica plugin. Acustica's Fire: The CM Comp uses the same Acqua Engine found in their regular plugins. It therefore benefits from Acustica's proprietary VVK (Vectorial Volterra Kernels) tech to deliver a highly accurate representation of nonlinear analogue behaviour. It also uses their latest Hyper system to give the best performance with a low CPU hit.

Fire: The CM Comp is a single-knob plugin in the same style as Acustica's other 10 Fire plugins such as Fire The Bus+ and the excellent freebie Fire The Pump saturator. The Neve-inspired plugin combines compression, clipping, saturation and EQ, with a focused set of controls and single large threshold knob.

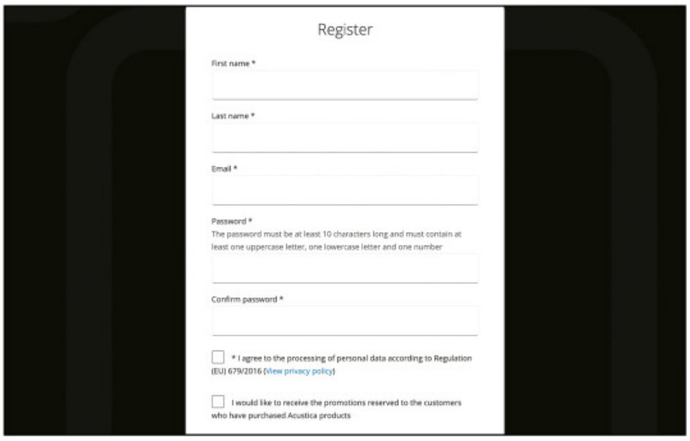
In this tutorial, we'll show you how to claim your personal plugin code and get up and running. We'll then work through the basic operational aspects of the plugin. It's easy to write off single-knob plugins as inflexible, but this is often not the case, and in the following walkthrough pages, we'll show you a bunch of uses for this excellent processor.

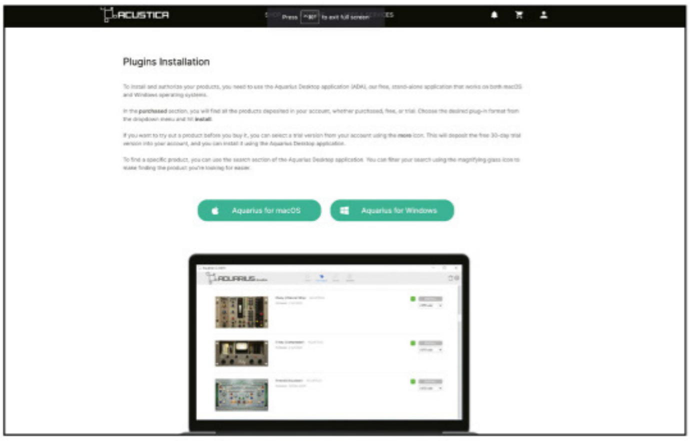
Finally, Acustica's stable has some great plugins including the Urei-inspired Nickel compressor, Neve-style Gold 5 channel strip, as well as Lava, which is a mic emulation plugin, and Sienna, their headphone mixing system. So, if you like Fire: The CM Comp and want to find out what else Acustica has to offer why not head over to www.acustica-audio.com.



Download the accompanying video and the MIDI/audio files at **bit.ly/cm324downloads**

> Step by step 1. Installation





1 > To get started, head over to this month's content page www.bit.ly/cm324downloads. With the current issue to hand, start the quiz and answer the questions. Once you've gained access, follow the link and input your data to get your Acustica Fire: The CM Comp activation code. Next, make an account at www.acustica-audio.com.

2 > Acustica plugins use an application called Aquarius to help with installation which you can download here www.acustica-audio.com/pages/aquarius. Once installed, run the app and head to the Settings page, then use the Activations tab to apply your activation code. Finally, within the Purchased page install Fire: The CM Comp.

> Step by step 2. Familiarising yourself with the plugin

1 > Fire: The CM Comp is a one-knob processor with a large Threshold control. If you load up the plugin and simply tweak this control you'll probably get some compression, but the processing is fine tuned using additional controls around the perimeter of the interface.

2 > The main compression controls are Time/Ratio. The Time slider (left) is a multi-parameter control that influences attack/release times and also attack behaviour (aka SHMOD). The Ratio slider (right) is for compression ratio (smooth adjustment from 1.5:1 to limiting).

3 > You also have Input/Output sliders at the top and bottom of the interface. In the bottom corners are the Preamp emulation (on/off) and high-pass filter (0, 100Hz and 250Hz). The Input control is before both the Threshold and Preamp, so input level adjustments cover both.

4 > There are some further options. Top right, you'll see a small OVS icon which accesses oversampling. By default this is 1x but you have four further options (2x, 4x, 8x, 16x). Finally, in the top left the Size option provides three options for the window scale (1x, 1.5x and 2x).

> Step by step

3. Firing up Fire: The CM Comp

1 > When you first load an instance of Fire: The CM Comp, you'll find you have a choice of two plugins. One of these (labelled ZL) is a zero-latency version designed primarily for use when recording. The plugins sound the same but we will use the regular version as it's more CPU-efficient.

2 > The next thing to notice is that Fire: The CM Comp does not have any meters. This is intentional and shouldn't make much of a difference. Nevertheless, as ever with processing, we should try and use our ears as much as possible.

3 > To get started, we've loaded up a drum loop and an instance of Fire: The CM Comp. The default settings on the compressor achieve negligible compression. For basic compression, we've adjusted the ratio to 4:1 and then gradually adjusted the main Threshold to about -28dB.

4 > With no automatic gain make up, the overall level is reduced by the compression. If you now increase the Input Trim, you'll hear the gain reduction increases even more. A key technique when using Fire: The CM Comp is to increase the Output level to compensate. Here we've boosted both the Input and Output.

5 > The default Time setting on Fire: The CM Comp achieves a pretty gentle compression curve. To dig into the sound a bit more and get audible and exciting compression effects, you need to use the faster settings. Here at the fastest setting, the compression is very clearly hitting the transients.

6 > As mentioned, the plugin includes a preamp emulation and this adds even harmonic distortions. The profile of the harmonics responds to the input level, with a second harmonic joined by further even harmonics as the level increases. If we simply switch this on with our current settings the harmonics are subtle but audible.

> Step by step

4. Shaping beats

1 > Compression is great for shaping beats, and Fire is the perfect tool. Let's start with a kit snare. In its raw form, this sounds quite dull and lifeless, and some compression can certainly make it more exciting. Starting with default settings, we've set the compression Ratio to 6:1 and Threshold to about -40dB.

2 > We can try a similar thing on a kick drum. This time, we're using the classic 909. With all of that low frequency energy, compression can be a bit tricky. Thankfully, using Fire's sidechain low-cut filters we can modify this behaviour. Here we've opted for the 100Hz setting with a medium to fast Time setting and 6:1 Ratio.

3 > This adds some compression but the fun begins when we adjust the Time setting. Gradually moving to the fastest setting adds energy, bringing up the tail of the sound, and once again we're adjusting the Output to taste. If we go too far, the snare transient suffers, but with a faster Time setting, the snare sounds much better.

4 > Sticking with kick drums, let's now try an 808. Here we've adjusted the Time setting towards a faster setting, adjusting the Threshold and Input level to create some saturation, enhancing this further with the Preamp emulation. This time, we've set the sidechain filter to 250Hz to create a ringing fat 808.

5 > Fire: The CM Comp has a lovely creamy response reminiscent of some of the best vintage compressors. This is suited to traditional drum kit processing tasks such as overheads and room mics. Here we've started with the overheads, setting the Ratio at 4:1 and Time at medium fast for a more punchy outcome.

6 > You can try similar initial settings for drum kit room mics, adjusting the Threshold and Input as required. Focus on tailoring the sound, using the sidechain low-cut filter, the preamp saturation and in particular the Time parameter, trying settings that are close to its Fast position. This really brings out the flavour of the room.

> Step by step

5. Characterful bass compression

1 > Although we can use precise fast compression to level out bass sounds, sometimes we want our compressor to add a bit of character. Fire: The CM Comp has a wonderfully squashy profile and is a great option. To get started, we've loaded a synth bass sound and inserted an instance of the plugin.

2 > Our bass sound has a prominent attack and moderate decay, both of which can be shaped using compression. Let's see what Fire can offer. We've set a 6:1 Ratio and then adjusted the Threshold and Input to taste. With a medium Time setting, we're adding some bite to the sound and tightening the decay slightly.

3 > With plenty of low frequencies in the bass sound, we can modify the compression behaviour using the sidechain high-pass filter. Here we've set ours to 250Hz. This has then allowed us to reduce the Threshold further. Rounding things off, we've added the Preamp option for some extra flavour.

4 > Electric bass can be quite uneven and sometimes benefits from a couple of compressors used in series. Here we've loaded up a *CM* Suite classic (EaReckon CM-COMP 87) as a primary compressor to clamp down on the peaks a bit and then after that added Fire: The CM Comp for some flavour.

5 > Our initial settings for Fire are quite gentle. Here we've set the Time setting roughly in the middle with the Ratio quite low at about 2.5:1. Adjusting the Threshold to taste, we've created a smoother overall bass sound that works better in the track.

6 > For something a bit more aggressive, we've made quite a few adjustments, adding the Preamp emulation, setting the Ratio to 4:1 and the high-pass filter to 250Hz. Now by setting the Time setting at its maximum, we're attacking the transients more and with a faster release for a more punchy sound.

> Step by step

6. Adding mix bus glue

1 > Gentle compression can be great for adding glue to submixes or the mix bus, and Fire: The CM Comp absolutely fits the bill. As noted from using it on our stereo drums, the flavour can be everything from subtle to dramatic and it's the former we're aiming for initially.

2 > First, add an instance as an insert on the mix bus. Here we've positioned it after our initial mix bus EQ. As mentioned, we're going for subtle glue and, to that end, a good startpoint is the default Time setting, then it's simply a case of adjusting the Threshold until we hear the desired amount of compression.

3 > With no meters, you have to rely on your ears. If you're not sure whether you can hear any compression, try bypassing the plugin to compare. Here we're beginning to get some compression with the Threshold at about -28dB, but it is very subtle, and we still have the Ratio at 1.5:1.

4 > At its middle Time setting, the attack/release profile is moderate but if we head towards the slower settings we can actually get an effect that works well on a mix bus. Here we've set the Time to medium slow, increasing the Ratio to 2:1. Then we've set the sidechain high pass to 100Hz.

5 > Saturation on the mix bus isn't for everyone, but Fire's Preamp emulation is pretty subtle, and switching this in adds a moderate lift to the overall presence of the mix. We've then increased the Input to drive this a bit more, modifying the Output level as needed.

6 > Finally, don't forget that Fire: The CM Comp includes a number of oversampling settings and if you're trying to squeeze the best sound from your mix bus processing, then this might be a good time to try them out. At higher settings, you may well spot a corresponding increase in CPU hit. **cm**

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The Lo-Fi Collection

This month, we're kicking back and basking in the crackly warmth of a freshly-baked pair of chilled lo-fi packs. Download them from bit.ly/cm324downloads

Laid-Back Lo-Fi

Robbie at Cyclick presents a suite of lo-fi textures, grooves and a pickle tray of one-shot sauce to daub on your sounds

"The chilled-out vibes of the current Lo-Fi genre are delved into with this brand new sample pack. There are three tempo-grouped folders (68, 76 & 82bpm) of beats, electric bass, electric guitar, piano, keyboard and synth loops, plus a collection of one-shots to sprinkle over your loops or to use to augment beats, as well as wrangle and mangle them into new forms.

"Though some 'ageing' of the instruments has been applied, either through tape emulation, distortion, vinyl (and other) noise treatments and filtering, the sounds haven't been given too much lo-fi processing by us. This means that you can take the provided sounds a whole lot further, perhaps by applying to the mix bus for some overall flavour.

"So, with this suite of sounds at your disposal, get into a relaxed zone and enjoy gradually piecing together your own laid-back, soporific tracks for study, travelling or just laying back after a long day at the coal-face."

There are more details in Rob's PDF in the Samples download folder at bit.ly/cm324downloads

SELECTED GEAR

Gretsch G5122DC Electromatic guitar
Squier Jazzmaster guitar
Musicman Stingray (1977) bass
Squier Precision bass
Little Labs Redeye DI/Reamper
Focusrite ISA828 preamps
Arturia V Collection & Mello-Fi plugin
Steinberg Nuendo 11
NI Kontakt 5
UAD plugins
Soundtoys plugins

Lo-Fi Hip-Hop

Taking a more hip-hop-angled spin on the assignment, Oli from Groove Criminals explains his crackling collection

"We've focused on the crackle, snap and pop of lo-fi this month, and the sounds of lo-fi hip-hop in particular. On the hardware side we threw some drum samples through both our Akai MPC and our Elektron Model:Samples as well as leaning into the degraded sounds of the MicroGranny 8-bit sampler. To further push the grit and wobble we used a couple of our favourite pedals for this type of effect, namely the Hungry Robot Wardenclyffe which has a lush reverb.

"On the software side we used Geist's programming tools to make some slick loops and beats. We harnessed the imported MPC 'swing templates' and also used the pitch control on the master channel to slightly pitch things down for a crunchier sound. For vinyl flavours, both AudioThing Vinyl Strip and iZotope Vinyl bring crackle and wobble. We also used Cymatics' Origin and Arturia's Mello-Fi (both free) to add some extra wow and flutter, not to mention some nice filtering. We've also sampled some actual crackle from various records and some genuine tape hiss from a couple of cassette recorders we had laying about."

SELECTED GEAR

Elektron Model:Samples
Bastl Instruments MicroGranny 2
Akai MPC 500
Hungry Robot Wardenclyffe pedal
Mid-fi Electronics For parts or repair
Various cassette players
Vestax Handy Trax turntable
FXpansion Geist 2
AudioThing Vinyl Strip
Arturia Tape Mello-Fi
iZotope Vinyl

FROM THE cm VAULT

Classic samples
Back to the ’80s

The sonic aesthetic of the 1980s seems to be more in vogue right now than ever. So, why not coat a touch of that era to your tracks?

Cycle back to the ’80s

Travelling back in time four decades to pick up some soundware, Cyclick’s Robbie explains his choices…

“The ’80s may always be associated with mullet hairdos, marble wash jeans and gated reverbs, but as is always the case, there was much more going on…

“No, this isn’t a set of samples based on the lead up to the 1989 fall of the Berlin Wall or the siege at the Iranian embassy in London in 1980, but rather an accompaniment to the set which will be delivered by my brother in loops and Groove Criminal to the right. Knowing that he will no doubt cover the classics of drum machine and synth, I have opted to focus on the electric guitar and bass.

“The following acts were aurally digested while creating these samples: Talking Heads, Talk Talk, The Police, Japan, ABC, Siouxsie and the Banshees, Cameo, The Cure, The Human League, Tears For Fears, Magazine, Duran Duran, U2, Haircut 100, Wham! and Killing Joke.”

SELECTED GEAR USED

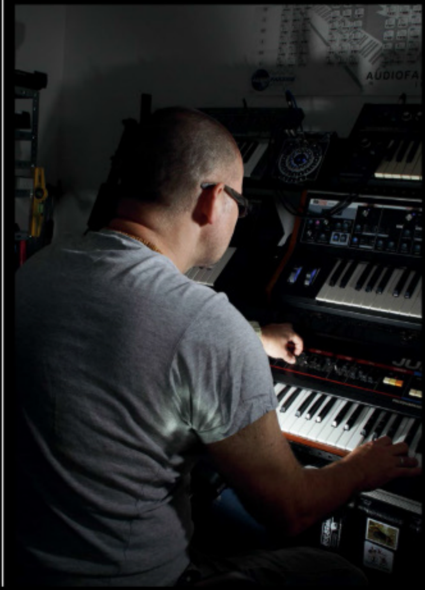
Musicman Stingray (1977)
Epiphone Ripper
Fender Stratocaster (1972 hardtail)
Squier Telecaster Standard
Boss GE-7 EQ, CS-3 Compressor and SD-1 Super Overdrive
Korg CMP-1 Compressor
Moog MF Boost
UAFX Starlight delay
Eventide Modfactor
Arion SCH-1 Stereo Chorus
Arion SFL-1 Stereo Flanger
Mosky Golden Horse booster
Kokko Overdrive

It’s a Groovy ’80s

Oli Bell from Groove Criminals landed his time machine in a shop full of synths and old drum machines, so got his recorder out…

“It’s all gone ’80s this month, so rather than do the whole XOX thing (again), we thought we’d drag out some of the less well known ’80s drum machines we’ve got in the bunker. None of the machines stand up to today’s tech in terms of editing voices or library of sounds, but all have that 16-bit sampled punchiness to them.

“To further turn back the clock we also ran each pattern through one of our ’80s FX units for some vintage gated reverb and digital delay action. We’ve thrown in a chunk of single hits as well, so you don’t have to wrestle with ’80s tiny LCD screen drum programming – you’re welcome. Synth-wise we thought we would concentrate on the beast that is Yamaha FM synthesis using our rack-mount TX81Z module. This covers all the usual shimmery pianos and digital basses. Just to add that extra gooey coating of ’80s goodness we ran the results through the Boss rack-mount super chorus for more classic processing.”



SELECTED GEAR USED

Yamaha TX81Z
Yamaha RX-15
Roland TR-505
Kawai RE-50E
Alesis HR-16B
Ibanez DM 1000
Peavey Univerb II
Boss CE-300
Boss RRV-10

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Loopmasters cm324 samples

This month's demo sample selection highlighting Loopmasters' latest releases

01 **Access Vocals** Cosmic Atmo & Vocals
02 **Loopmasters** Alte Sounds
03 **Blind Audio** Breakout Vintage Hip-Hop
04 **IQ Samples** Brazilian Bass
05 **Industrial Strength** Lenny Dee Neon Drive
06 **Loopmasters** Pop Britannia

cm/video

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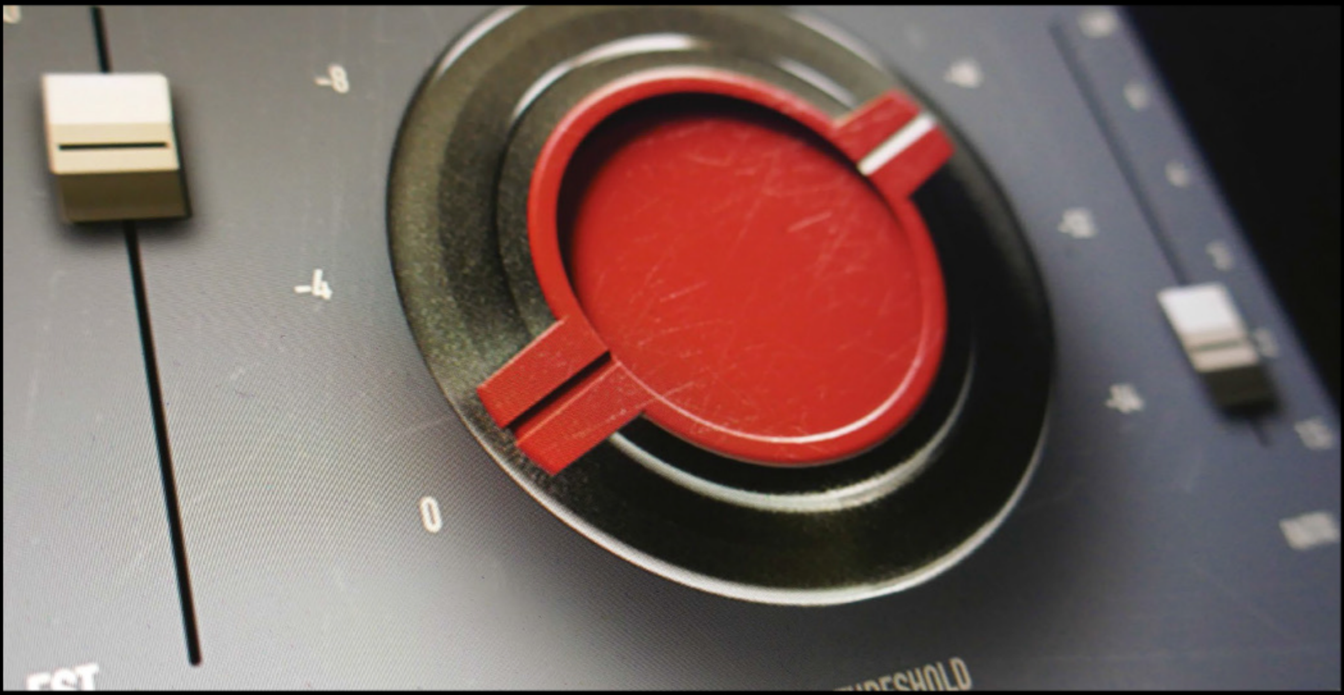

ACUSTICA AUDIO FIRE THE CM COMP

Learn how to use this month's free software to shape beats, bass and glue your entire mix bus!

Read the full article from p84

cm/experts

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MAKE PUNCHY BASS

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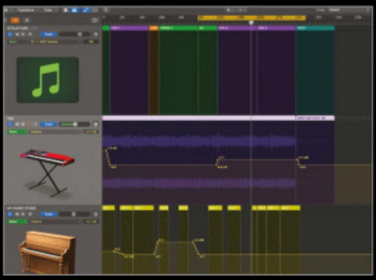
MIX MASTERCLASS

HOW TO USE LEVEL RIDES



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On test
ROLI RISE 2, D16 Lush 2, United Plugins Pluralis

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